University of Cincinnati
FEB 11 2009
LIBRARY

INTERNATIONAL
Standards Worldwide

Address 100 Barr Harbor Drive
PO Box C700
W. Conshohocken, PA
19428-2959 I USA

Phone 610.832.9500
Fax 610.832.9555
e-mail service@astm.org
Web www.astm.org

Journal of Testing and Evaluation, November 2007, Vol. 35, No. 6
Available online at www.astm.org

This issue of the Journal of Testing and Evaluation was originally published without the End of Year Table of Contents and the Author and Subject Indexes. These missing items are now included with this letter to complete your journal issue. There are no End of Year Table of Contents, Author or Subject Indexes missing from the website. This is hardbound only.

ASTM apologizes for the error and regrets any inconvenience to its readers.

Sincerely,

Maria Langiewicz
Technical Papers Liaison
ASTM International
Books & Journals
100 Barr Harbor Drive.
W. Conshohocken, PA 19428
610-832-9620
mlangiew@astm.org

ENGR
Linder

Journal of Testing and Evaluation
Author Index to Volume 35
2007

Number	Month of Issue	Pages
1	January	1–109
2	March	111–219
3	May	221–337
4	July	339–454
5	September	455–562
6	November	563–685

A

Abojaradeh, M. A., Witczak, Matthew W., Mamlouk, Michael S., and Kaloush, Kamil E.: Validation of Initial and Failure Stiffness Definitions in Flexure Fatigue Test for Hot Mix Asphalt, Jan., 95

Abreu, M. Marinho: *see* Gonçalves, T. Diaz

Agrianidis, Pavlos: *see* David, Constantine

Al-Qadi, Imad L., Fini, Eli. H., Elseifi, Mostafa A., Masson, J-F., and McGhee, Kevin M.: Development of a Viscosity Specification for Hot-Poured Bituminous Sealants, July, 395

Andrino, Marcílio H.: *see* Minicuci, Domingos José

Anthymidis, Konstantinos: *see* David, Constantine

Audouin, L.: *see* Verdu, J.

B

Bacha, A., Feuerstein, M., Desrayaud, Ch., and Klöcker, H.: Measuring Stress Strain Curves to Large Strains on Sheet Metal, March, 157

Barbuzza, Rosana G., Vénere, Marcelo J., and Clausse, Alejandro: Quality Assurance of Manufactures by Means of Intelligent Tomographic Processing, Jan., 59

Bayoumi, M. R.: *see* Khairaldien, W. M.

Beges, Gaber, Stare, Edo, and Drnovsek, Janko: Ambiguities in Technical Standards—Case Study IEC 60112—Measuring the Resistance of Solid Isolating Materials to Tracking, March, 118

Bell, Jennifer M., and Odom, Edwin M.: An Experimentally-Based Analytical Model of the Stress Field in an Iosipescu Composite Test Specimen, July, 381

Benmokrane, Brahim: *see* Zhang, Burong

Bentz, D. P.: Combination of Transient Plane Source and Slug Calorimeter Measurements to Estimate the Thermal Properties of Fire Resistive Materials, May, 240

Berton, G.: *see* Lacroix, F.

Bhatnagar, N.: *see* Brieu, M.

Bhosale, Sukhanand S., and Mandal, Jnanendra N.: Experimental Study for Evaluating Crack Retardation of Asphalt Concrete Overlays, Nov., 589

Billets, Stephen, and Dindal, Amy: History and Accomplishments of the U.S. Environmental Protection Agency's Superfund Innovative Technology Evaluation (SITE) Monitoring and Measurement Technology (MMT) Program, Sept., 486

Bingefors, Nils: *see* Brenner, Richard

Bix, Laura: *see* Severin, Jane

Brenner, Richard, Bingefors, Nils, and Mohn, Bjarte: Evaluation of a Humidity Sensor for Use in an Environment Exposed to Radiation, Sept., 469

Brieu, M., Diani, J., and Bhatnagar, N.: A New Biaxial Tension Test Fixture for Uniaxial Testing Machine—A Validation for Hyperelastic Behavior of Rubber-Like Materials, July, 364

Brosnan, James T., McNitt, Andrew S., and Schlossberg, Maxim J.: An Apparatus to Evaluate the Pace of Baseball Field Playing Surfaces, Nov., 676

Burgess, G.: *see* Singh, J.

C

Carvalho Santos, Francisco de: *see* Minicuci, Domingos José

Cary, Richard T.: The Development of ASTM D 4772: The Water Flow Test Method, Sept., 533

Cassanelli, A. N.: *see* Wainstein, J. E.

Chang, Chieh-Min, Chen, Jian-Shiuh, Fang, Chien-Cheng, and Chang, Meng-Kung: Evaluation of Nonnuclear Density Tests on Hot Mix Asphalt Segregation, Nov., 563

Chang, Meng-Kung: *see* Chang, Chieh-Min

Chantarasomboon, Y.: *see* Singh, S. Paul

Chen, Dar Hao, and Scullion, Tom: Using Nondestructive Testing Technologies to Assist in Selecting the Optimal Pavement Rehabilitation Strategy, March, 211

Chen, Dar Hao, Zhou, Fujie, and Yuan, Jianbo: Verification and Calibration of VESYS5W Fatigue Cracking Model Using Results from Accelerated Pavement Testing, Sept., 544

Chen, Dar-Hao: Using Rolling Dynamic Deflectometer and Overlay Tester to Determine the Reflective Cracking Potential, Nov., 644

Chen, H. X., Chua, Patrick S. K., and Lim, G. H.: Fault Classification of Water Hydraulic System by Vibration Analysis with Support Vector Machine, July, 408

Chen, Jian-Shiuh: *see* Chang, Chieh-Min

Cheney, Daniel: *see* Leichti, Robert

Cheng, J. J. Roger: *see* Das, Sreekanta

Chonhenchob, V.: *see* Singh, S. Paul

Chowdhury, Arif: *see* Luce, Anthony

Chua, Patrick S. K.: *see* Chen, H. X.

Cicerone, Marcus T.: *see* Dunkers, Joy P.

Clauson, Milo: *see* Leichti, Robert

Clausse, Alejandro: *see* Barbuzza, Rosana G.

Cocco, R. G.: *see* Wainstein, J. E.

Colin, X.: *see* Verdu, J.

Cooke, Malcolm N.: *see* Dunkers, Joy P.

D

Dalinaidu, A.: *see* Rao, B. Hanumantha

Das, Sreekanta, Cheng, J. J. Roger, and Murray, David W.: A Test Method to Determine Low-Cycle-Fatigue Behavior of Wrinkled Pipe, Jan., 1

David, Constantine, Anthymidis, Konstantinos, Agrianidis, Pavlos, and Tsipas, Dimitrios: Determination of the Fatigue Resistance of HVOF Thermal Spray WC-CoCr Coatings by Means of Impact Testing, Nov., 630

Dean, David: *see* Dunkers, Joy P.

De Baets, P.: *see* Samyn, P.

Degrieck, J.: *see* Samyn, P.

Desrayaud, Ch.: *see* Bacha, A.

de Vedia, L. A.: *see* Wainstein, J. E.

Diani, J.: *see* Brieu, M.

Dilek, Ufuk, and Leming, Michael L.: Deicer Salt Scaling Resistance of Concrete Containing Manufactured Sands, March, 134

Dindal, Amy: *see* Billets, Stephen

dos Santos Júnior, Auteliano Antunes: *see* Minicuci, Domingos José

Drnovsek, Janko: *see* Beges, Gaber

Dunkers, Joy P., Leigh, Stefan D., Dean, David, Cooke, Malcolm N., Ketcham, Richard A., and Cicerone, Marcus T.: Methodology for Evaluating Candidate Geometric Reference Scaffolds, Nov., 668

Džugan, Jan, and Viehrig, Hans-Werner: Crack Initiation Determination for Three-Point-Bend Specimens, May, 245

E

Eckhoff, Mike: *see* Mackes, Kurt H.

Elliot, B.: *see* Liu, L.

El-Magd, Essam, Gebhard, Jürgen, and Stuhrmann, Jan: Characterization and Simulation of the Creep Behavior of P92 Sandwich Structures at 923 K with Loading Transverse to the Intermediate Layer, Jan., 20

Elseifi, Mostafa A.: *see* Al-Qadi, Imad L.

F

Fan, Xianfeng, and Zuo, Ming J.: Gearbox Fault Feature Extraction Using Hilbert Transform, S-Transform, and a Statistical Indicator, Sept., 477

Fang, Chien-Cheng: *see* Chang, Chieh-Min

Fayolle, B.: *see* Verdu, J.

Fernández, Filiberto: *see* Romero, Jesús

Fernández-Sáez, J.: *see* Loya, J. A.

Ferreira, Louis A.: *see* Hossain, Mustaque

Feuerstein, M.: *see* Bacha, A.

Fini, Eli. H.: *see* Al-Qadi, Imad L.

Fogle, Chris M.: *see* Wasiuddin, Nazimuddin M.

see Wasiuddin, Nazimuddin M.

Fukuzato, Shingo: *see* Purnowidodo, Anindito

G

Gartner, Barbara L.: *see* Silva, Antonio

Gebhard, Jürgen: *see* El-Magd, Essam

Gilliland, Dennis: *see* Severin, Jane

Gómez, X.: *see* Urchegui, M. A.

Gomez-Ramirez, Franco: *see* Gopalakrishnan, Kasthurirangan

Gonçalves, T. Diaz, and Abreu, M. Marinho: Testing of Salt-Contaminated Materials: Use of Aqueous Solutions for Control of Relative Humidity, Sept., 529

Gopalakrishnan, Kasthurirangan, Gomez-Ramirez, Franco, and Thompson, Marshall R.: Pavement Deformation Characteristics under Repeated Aircraft Loading with Fixed Wander Sequence, July, 429

H

Hajj, Elie Y., Siddharthan, Raj V., Sebaaly, Peter E., and Weitzel, Dean: Laboratory-based Unified Permanent Deformation Model for Hot-Mix Asphalt Mixtures, May, 272

Harada, Toyomitsu, and Noguchi, Hiroshi: Calculation of Stress Fields Near Notch Roots in Real Life Structures Subjected to In-Plane and Out-of-Plane Deformations, Jan., 10

Hayajneh, Mohammed T., and Radaideh, Saleh. M.: Monitoring Hole Quality in a Drilling Process Using a Fuzzy Subtractive Clustering-based System Identification Method, May, 297

He, Xue: *see* Sato, Yasumoto

He, Z. B.: *see* Zhang, J.

Hefer, Arno W., Little, Dallas N., and Herbert, Bruce E.: Bitumen Surface Energy Characterization by Inverse Gas Chromatography, May, 233

Hellmann, John R.: *see* Luscher, Walter G.

Herbert, Bruce E.: *see* Hefer, Arno W.

Hernández, Rogelio: *see* Romero, Jesús

Holmes, J. W.: *see* Yang, D.

Hossain, Mustaque, Ferreira, Louis A., Siddique, Zahidul Q., Khanum, Taslima, and Montney, Rodney: Effect of Quarry Production Process on Specific Gravities of Aggregates, Jan., 45

Hsu, Cheng-Tzu Thomas: *see* Punurai, Sun

Huang, Jianhua: Assessment of Clothing Effects in Thermal Comfort Standards: A Review, Sept., 455

J

Jadaan, Osama M., Nemeth, Noel N., and Segall, Albert E.: Time-Dependent Reliability of Thermally Shocked SiC Tubes, Jan., 75

Jarimopas, B., Sayasoonthorn, S., Singh, S. P., and Singh, Jagjit: Test Method to Evaluate Bruising During Impacts to Apples and Compare Cushioning Materials, May, 321

K

Kaloush, Kamil E.: *see* Abojaradeh, M. A.

Kang, H., and Reyes-Villanueva, G.: Fatigue Prediction of Lightweight Thermoplastic Fiber-Metal Laminates, May, 266

Kapoor, K., Padmaprabu, C., Ramana Rao, S. V., Sanyal, T., and Kashyap, B. P.: Texture Evaluation in Zr-2.5 % Nb Pressure Tubes Using Kearn's *f* Parameter, May, 327

Karthik, V., Laha, K., Parameswaran, P., Kasiviswanathan, K. V., and Raj, Baldev: Small Specimen Test Techniques for Estimating the Tensile Property Degradation of Mod 9Cr-1Mo Steel on Thermal Aging, July, 438

Kashyap, B. P.: *see* Kapoor, K.

Kasiviswanathan, K. V.: *see* Karthik, V.

Kawamoto, Kyohei, Yoshimitsu, Shintaro, Noguchi, Hiroshi, and Yoshimura, Tatsuhiko: Laser Welding Conditions to Improve Tensile Strength and Fatigue Strength of a Lap Joint in Aluminum Alloys, July, 416

Kelly, Stephen K.: *see* Mackes, Kurt H.

Ketcham, Richard A.: *see* Dunkers, Joy P.

Khairaldien, W. M., Khalil, A. A., and Bayoumi, M. R.: Production of Aluminum-Silicon Carbide Composites Using Powder Metallurgy at Sintering Temperatures above the Aluminum Melting Point, Nov., 655

Khalil, A. A.: *see* Khairaldien, W. M.

Khanum, Taslima: *see* Hossain, Mustaque

Kim, H.: *see* Lee, K.

Kim, N.: *see* Lee, K.

Kim, Y.: *see* Lee, K.

Kleemann, Karl: *see* Leichti, Robert J.

Klöcker, H.: *see* Bacha, A.

Kuczek, Thomas: *see* Pellinen, Terhi

L

Lacroix, F., Tougui, A., Berton, G., Ranganathan, N., and Neelakantan, N. R.: Tensile Creep Studies on Filled Polychloroprene Elastomer, July, 449

Laha, K.: *see* Karthik, V.

Lange, David: *see* Shen, Lin

Lee, K., Kim, H., Kim, N., and Kim, Y.: Dynamic Modulus of Asphalt Mixtures for Development of Korean Pavement Design Guide, March, 143

Leendertz, J. S.: *see* Samyn, P.

Leichti, Robert, Clauson, Milo, and Cheney, Daniel: Flexural Creep Apparatus and Testing for Structural Composite Lumber, Sept., 553

Leichti, Robert J., Kleemann, Karl, and Miller, Thomas H.: Boundary Condition Role in Tests of Wood Compression Webs, Sept., 539

Leigh, Stefan D.: *see* Dunkers, Joy P.

Leming, Michael L.: *see* Dilek, Ufuk

Li, Shuo, Zhu, Karen, and Noureldin, Samy: Evaluation of Friction Performance of Coarse Aggregates and Hot-Mix Asphalt Pavements, Nov., 571

Liang, Bin: *see* Noda, Nao-Aki

Lim, G. H.: *see* Chen, H. X.

Linz, John: *see* Severin, Jane

Little, Dallas N.: *see* Hefer, Arno W.

Liu, L., Petrinic, N., Elliot, B., and Ruiz, C.: Quantification of Constitutive Behavior of Sheet Metals Subjected to Dynamic Bulge Loading, Sept., 502

Lockhart, Hugh: *see* Severin, Jane

Loya, J. A., and Fernández-Sáez, J.: Dynamic Fracture-Initiation Toughness Determination of Al 7075-T651 Aluminum Alloy, Jan., 25

Luce, Anthony, Mahmoud, Enad, Masad, Eyad, and Chowdhury, Arif: Relationship of Aggregate Microtexture to Asphalt Pavement Skid Resistance, Nov., 578

Luscher, Walter G., Hellmann, John R., Segall, Albert E., Shelleman, David L., and Scheetz, Barry E.: A Critical Review of the Diametral Compression Method for Determining the Tensile Strength of Spherical Aggregates, Nov., 624

Lynch, Dennis L.: *see* Mackes, Kurt H.

M

Mackes, Kurt H., Lynch, Dennis L., Kelly, Stephen K., and Eckhoff, Mike: Missionary Ridge Fire Cost Assessment, March, 167

Mahmoud, Enad: *see* Luce, Anthony

Makabe, Chobin: *see* Purnowidodo, Anindito

Mamlouk, Michael S.: *see* Abojaradeh, M. A.

Mandal, Jnanendra N.: *see* Bhosale, Sukhanand S.

Marasteanu, Mihai: *see* Zofka, Adam

Masad, Eyad: *see* Luce, Anthony

Masmoudi, Radhouane: *see* Zhang, Burong

Masson, J-F.: *see* Al-Qadi, Imad L.

Mba, D.: *see* Wale, D.

McGhee, Kevin M.: *see* Al-Qadi, Imad L.

McNitt, Andrew S.: *see* Brosnan, James T.

Meged, Y.: Nondestructive Testing for the Integrity Evaluation of Erosive and Abrasive Boundary Layers, Nov., 634

Mercado, Fortino: *see* Romero, Jesús

Miller, Thomas H.: *see* Leichti, Robert J.

Minak, Giangiacomo: Comparison of Different Methods for Fatigue Limit Evaluation by Means of the Monte Carlo Method, March, 126

Minicuci, Domingos José, dos Santos Júnior, Auteliano Antunes, Andrino, Marcílio H., and Carvalho Santos, Francisco de: Stress Evaluation of Railroad Forged Wheels by Ultrasonic Testing, Jan., 66

Mohn, Bjarte: *see* Brenner, Richard

Montney, Rodney: *see* Hossain, Mustaque

Morrell, Jeffrey J.: *see* Silva, Antonio

Motola, Yael, and Uzan, Jacob: Anisotropy of Field-Compacted Asphalt Concrete Material, Jan., 103

Murray, David W.: *see* Das, Sreekanta

N

Naderi, M.: New Twist-Off Method for the Evaluation of In-Situ Strength of Concrete, Nov., 602

Narita, Fumio: *see* Shindo, Yasuhide

Neelakantan, N. R.: *see* Lacroix, F.

Nemeth, Noel N.: *see* Jadaan, Osama M.

Neumeister, Jonas M.: *see* Petterson, Kaj B.

Noda, Nao-Aki, and Liang, Bin: Stress Intensity Formulas for Three-dimensional Cracks in the Vicinity of an Interface, March, 192

Noguchi, Hiroshi: *see* Harada, Toyomitsu

see Kawamoto, Kyohei

Noureldin, Samy: *see* Li, Shuo

O

Odom, Edwin M.: *see* Bell, Jennifer M.

O'Rear, Edgar A.: *see* Wasiuddin, Nazimuddin M.

see Wasiuddin, Nazimuddin M.

P

Padmaprabu, C.: *see* Kapoor, K.

Pan, Tongyan, and Tutumluer, Erol: Quantification of Coarse Aggregate Surface Texture Using Image Analysis, March, 177

Parameswaran, P.: *see* Karthik, V.

Pellinen, Terhi, and Kuczek, Thomas: Methodology of Assessing Testing Variation for Volumetric Quantities in Hot Mix Asphalt Production, May, 281

Petrinic, N.: *see* Liu, L.

Petterson, Kaj B., Neumeister, Jonas M., and Strandberg, Morten: V-Notched Shear Specimens for the Inclined Double Notch Shear Test, Jan., 85

Prakash, Raghu V, and Shing Shin, Chow: An Evaluation of Stress-Strain Property Prediction by Automated Ball Indentation (ABI) testing, May, 221

Punurai, Sun, Punurai, Wonsiri, and Hsu, Cheng-Tzu Thomas: A Very Early Strength Concrete for Highway Construction, Nov., 609

Punurai, Wonsiri: *see* Punurai, Sun

Purnowidodo, Anindito, Fukuzato, Shingo, Saimoto, Akihide, and Makabe, Chobin: Crack Growth Behavior in Overloaded Specimens with Sharp Notch in Low Carbon Steel, Sept., 463

R

Radaideh, Saleh. M.: *see* Hayajneh, Mohammed T.

Raj, Baldev: *see* Karthik, V.

Ramana Rao, S. V.: *see* Kapoor, K.

Ranganathan, N.: *see* Lacroix, F.

Rao, B. Hanumantha, Dalinaidu, A., and Singh, D. N.: Accelerated Diffusion Test on the Intact Rock Mass, March, 111

Reyes-Villanueva, G.: *see* Kang, H.

Romero, Jesús, Hernández, Rogelio, Fernández, Filiberto, Mercado, Fortino, and van Walle, Eric: Reconstitution Process by Stud Welding for the Surveillance Program in Mexico, Sept., 514

Ruiz, C.: *see* Liu, L.

S

Saha, K.: *see* Singh, J.

Saimoto, Akihide: *see* Purnowidodo, Anindito

Samyn, P., Van Schepdael, L., Leendertz, J. S., Van Paepegem, W., De Baets, P., and Degrieck, J.: Short-Beam-Shear Testing of Composite Rings With Variable Cross Section as Representative for Full-scale Delamination, May, 310

Sanyal, T.: *see* Kapoor, K.

Sato, Yasumoto, He, Xue, Takeda, Yoichi, and Shoji, Tetsuo: Development of a Stress Corrosion Cracking Test Methodology Using Tube-shaped Specimens, May, 254

Sayasoonthorn, S.: *see* Jarimopas, B.

Scheetz, Barry E.: *see* Luscher, Walter G.

Schlossberg, Maxim J.: *see* Brosnan, James T.

Scullion, Tom: *see* Chen, Dar Hao

Sebaaly, Peter E.: *see* Hajj, Elie Y.

Segall, Albert E.: *see* Jadaan, Osama M.

see Luscher, Walter G.

Severin, Jane, Bix, Laura, Linz, John, Gilliland, Dennis, and Lockhart, Hugh: A New Methodology for Whole-Package Microbial Challenge Testing for Medical Device Trays, July, 373

Shelleman, David L.: *see* Luscher, Walter G.

Shen, Lin, Struble, Leslie, and Lange, David: New Method for Measuring Static Segregation of Self-Consolidating Concrete, May, 303

Shindo, Itaru: *see* Shindo, Yasuhide

Shindo, Yasuhide, Shindo, Itaru, and Narita, Fumio: Effect of Magnetic Field on Fatigue Crack Propagation of Single-Edge Cracked Soft Ferromagnetic Specimens under Mode I Loading, March, 151

Shing Shin, Chow: *see* Prakash, Raghu V

Shoji, Tetsuo: *see* Sato, Yasumoto

Siddharthan, Raj V.: *see* Hajj, Elie Y.

Siddique, Zahidul Q.: *see* Hossain, Mustaque

Silva, Antonio, Gartner, Barbara L., and Morrell, Jeffrey J.: Towards the Development of Accelerated Methods for Assessing the Durability of Wood Plastic Composites, March, 203

Singh, D. N.: *see* Rao, B. Hanumantha

Singh, J., Singh, S. P., Burgess, G., and Saha, K.: Measurement, Analysis, and Comparison of the Parcel Shipping Shock and Drop Environment of the United States Postal Service with Commercial Carriers, July, 424

see Singh, S. Paul

Singh, Jagjit: *see* Jarimopas, B.

Singh, S. P.: *see* Jarimopas, B.

see Singh, J.

Singh, S. Paul, Chonhenchob, V., Chantarasomboon, Y., and Singh, J.: Testing and Evaluation of Quality Changes of Treated Fresh-Cut Tropical Fruits Packaged in Thermoformed Plastic Containers, Sept., 522

Sinkonde, Dennis, Wen, Hao Pei, and Yi, Xiao Qing: Evaluate the Simple Surface Energy of Aggregates Using the Capillary Rise Method, Nov., 618

Stare, Edo: *see* Beges, Gaber

Strandberg, Morten: *see* Petterson, Kaj B.

Struble, Leslie: *see* Shen, Lin

Stuhrmann, Jan: *see* El-Magd, Essam

T

Tackett, Bob, and Zhang, Jilei: A Biaxial Load Cell Design for Simultaneous Measurement of Horizontal and Vertical Spring Forces in Sinuous Spring-Supported Seating, July, 339

Takeda, Yoichi: *see* Sato, Yasumoto

Tato, W.: *see* Urchegui, M. A.

Thompson, Marshall R.: *see* Gopalakrishnan, Kasthurirangan

Tougui, A.: *see* Lacroix, F.

Tsipas, Dimitrios: *see* David, Constantine

Tutumluer, Erol: *see* Pan, Tongyan

U

Ulugergerli, Emin U., and Uyanik, Osman: Statistical Correlations Between Seismic Wave Velocities and SPT Blow Counts and the Relative Density of Soils, March, 187

Urchegui, M. A., Tato, W., and Gómez, X.: A Method for Evaluating Fretting Wear Scars in Thin Steel Roping Wires Based on Confocal Imaging Profilometry, July, 357

Uyanik, Osman: *see* Ulugergerli, Emin U.

Uzan, Jacob: *see* Motola, Yael

V

Van Paepegem, W.: *see* Samyn, P.

Van Schepdael, L.: *see* Samyn, P.

van Walle, Eric: *see* Romero, Jesús

Vénere, Marcelo J.: *see* Barbuzza, Rosana G.

Verdu, J., Colin, X., Fayolle, B., and Audouin, L.: Methodology of Lifetime Prediction in Polymer Aging, May, 289

Viehrig, Hans-Werner: *see* Džugan, Jan

W

Wainstein, J. E., Cocco, R. G., de Vedia, L. A., and Cassanelli, A. N.: Influence of the Calibration Points on the S_{pb} Parameter Behavior, Jan., 53

Wale, D., and Mba, D.: A Journal Bearing Test Rig with Reduced Uncertainty: Some Design Considerations, July, 349

Wang, Yang: *see* Xia, Yuanming

Wasiuddin, Nazimuddin M., Fogle, Chris M., Zaman, Musharraf M., and O'Rear, Edgar A.: Effect of Antistrip Additives on Surface Free Energy Characteristics of Asphalt Binders for Moisture-Induced Damage Potential, Jan., 36

Wasiuddin, Nazimuddin M., Fogle, Chris M., Zaman, Musharraf M., and O'Rear, Edgar A.: Characterization of Thermal Degradation of Liquid Amine Anti-Strip Additives in Asphalt Binders due to RTFO and PAV-Aging, July, 387

Weitzel, Dean: *see* Hajj, Elie Y.

Wen, Hao Pei: *see* Sinkonde, Dennis

Witczak, Matthew W.: *see* Abojaradeh, M. A.

X

Xia, Yuanming, and Wang, Yang: Dynamic Testing of Materials with the Rotating Disk Indirect Bar-Bar Tensile Impact Apparatus, Jan., 31

Y

Yan, Xiangqiao: Numerical Analysis of Rectangular Plate with Symmetric Edge Cracks and Edge Half-Circular Hole Cracks in Tension, Sept., 557

Yan, Xiangqiao: A New Numerical Analysis for Rectangular Tensile Sheet with Single Edge Crack by Boundary Elements, Nov., 682

Yang, D., and Holmes, J. W.: Experimental Technique for Fully-Reversed Low-Cycle Fatigue Testing of Thin Metallic Foils, July, 404

Yi, Xiao Qing: *see* Sinkonde, Dennis

Yoshimitsu, Shintaro: *see* Kawamoto, Kyohei

Yoshimura, Tatsuhiko: *see* Kawamoto, Kyohei

Yuan, Jianbo: *see* Chen, Dar Hao

Yuan, S. J.: *see* Zhang, J.

Z

Zaman, Musharraf M.: *see* Wasiuddin, Nazimuddin M.

see Wasiuddin, Nazimuddin M.

Zelinka, Samuel L.: Uncertainties in Corrosion Rate Measurements of Fasteners Exposed to Treated Wood at 100 % Relative Humidity, Jan., 106

Zhang, Burong, Masmoudi, Radhouane, and Benmokrane, Brahim: New Method for Testing Fiber-reinforced Polymer Rods Under Flexure, March, 171

Zhang, J., Yuan, S. J., and He, Z. B.: Measurement of Strain Distribution and Material Flow in Bulk Deformation by the Screw Method, Sept., 496

Zhang, Jilei: *see* Tackett, Bob

Zhou, Fujie: *see* Chen, Dar Hao

Zhu, Karen: *see* Li, Shuo

Zofka, Adam, and Marasteanu, Mihai: Development of Double Edge Notched Tension (DENT) Test for Asphalt Binders, May, 259

Zuo, Ming J.: *see* Fan, Xianfeng

Journal of Testing and Evaluation
Subject Index to Volume 35
2007

A

Abrasion
Nondestructive Testing for the Integrity Evaluation of Erosive and Abrasive Boundary Layers (Y. Meged), Nov., 634

Accelerated pavement testing
Verification and Calibration of VESYS5W Fatigue Cracking Model Using Results from Accelerated Pavement Testing (Dar Hao Chen, Fujie Zhou, and Jianbo Yuan), Sept., 544

Accelerated tests
Accelerated Diffusion Test on the Intact Rock Mass (B. Hanumantha Rao, A. Dalinaidu, and D. N. Singh), March, 111

Acid
Effect of Antistrip Additives on Surface Free Energy Characteristics of Asphalt Binders for Moisture-Induced Damage Potential (Nazimuddin M. Wasiuddin, Chris M. Fogle, Musharraf M. Zaman, and Edgar A. O'Rear), Jan., 36
Characterization of Thermal Degradation of Liquid Amine Anti-Strip Additives in Asphalt Binders due to RTFO and PAV-Aging (Nazimuddin M. Wasiuddin, Chris M. Fogle, Musharraf M. Zaman, and Edgar A. O'Rear), July, 387

ACQ
Uncertainties in Corrosion Rate Measurements of Fasteners Exposed to Treated Wood at 100 % Relative Humidity (Samuel L. Zelinka), Jan., 106

Adhesion
Bitumen Surface Energy Characterization by Inverse Gas Chromatography (Arno W. Hefer, Dallas N. Little, and Bruce E. Herbert), May, 233
Evaluate the Simple Surface Energy of Aggregates Using the Capillary Rise Method (Dennis Sinkonde, Hao Pei Wen, and Xiao Qing Yi), Nov., 618

Affected material zone
Nondestructive Testing for the Integrity Evaluation of Erosive and Abrasive Boundary Layers (Y. Meged), Nov., 634

Aggregate
Effect of Quarry Production Process on Specific Gravities of Aggregates (Mustaque Hossain, Louis A. Ferreira, Zahidul Q. Siddique, Taslima Khanum, and Rodney Montney), Jan., 45
Relationship of Aggregate Microtexture to Asphalt Pavement Skid Resistance (Anthony Luce, Enad Mahmoud, Eyad Masad, and Arif Chowdhury), Nov., 578
A Critical Review of the Diametral Compression Method for Determining the Tensile Strength of Spherical Aggregates (Walter G. Luscher, John R. Hellmann, Albert E. Segall, David L. Shelleman, and Barry E. Scheetz), Nov., 624

Air content
Deicer Salt Scaling Resistance of Concrete Containing Manufactured Sands (Ufuk Dilek and Michael L. Leming), March, 134

Alkaline copper quaternary
Uncertainties in Corrosion Rate Measurements of Fasteners Exposed to Treated Wood at 100 % Relative Humidity (Samuel L. Zelinka), Jan., 106

Aluminium automotive alloy
Measuring Stress Strain Curves to Large Strains on Sheet Metal (A. Bacha, M. Feuerstein, Ch. Desrayaud, and H. Klöcker), March, 157

Aluminum alloy
Laser Welding Conditions to Improve Tensile Strength and Fatigue Strength of a Lap Joint in Aluminum Alloys (Kyohei Kawamoto, Shintaro Yoshimitsu, Hiroshi Noguchi, and Tatsuhiko Yoshimura), July, 416

Aluminum silicon carbide composites
Production of Aluminum-Silicon Carbide Composites Using Powder Metallurgy at Sintering Temperatures above the Aluminum Melting Point (W. M. Khairaldien, A. A. Khalil, and M. R. Bayoumi), Nov., 655

Aluminum-copper alloy
An Evaluation of Stress-Strain Property Prediction by Automated Ball Indentation (ABI) testing (Raghu V Prakash and Chow Shing Shin), May, 221

Ambiguity
Ambiguities in Technical Standards—Case Study IEC 60112—Measuring the Resistance of Solid Isolating Materials to Tracking (Gaber Beges, Edo Stare, and Janko Drnovsek), March, 118

Analysis
Measurement, Analysis, and Comparison of the Parcel Shipping Shock and Drop Environment of the United States Postal Service with Commercial Carriers (J. Singh, S. P. Singh, G. Burgess, and K. Saha), July, 424

Angularity
Deicer Salt Scaling Resistance of Concrete Containing Manufactured Sands (Ufuk Dilek and Michael L. Leming), March, 134

Anisotropy
Anisotropy of Field-Compacted Asphalt Concrete Material (Yael Motola and Jacob Uzan), Jan., 103
Texture Evaluation in Zr-2.5 % Nb Pressure Tubes Using Kearn's f Parameter (K. Kapoor, C. Padmaprabu, S. V. Ramana Rao, T. Sanyal, and B. P. Kashyap), May, 327

Anti-strip additives
Characterization of Thermal Degradation of Liquid Amine Anti-Strip Additives in Asphalt Binders due to RTFO and PAV-Aging (Nazimuddin M. Wasiuddin, Chris M. Fogle, Musharraf M. Zaman, and Edgar A. O'Rear), July, 387

Antistrip additives
Effect of Antistrip Additives on Surface Free Energy Characteristics of Asphalt Binders for Moisture-Induced Damage Potential (Nazimuddin M. Wasiuddin, Chris M. Fogle, Musharraf M. Zaman, and Edgar A. O'Rear), Jan., 36

Apolar
Evaluate the Simple Surface Energy of Aggregates Using the Capillary Rise Method (Dennis Sinkonde, Hao Pei Wen, and Xiao Qing Yi), Nov., 618

Apple
Test Method to Evaluate Bruising During Impacts to Apples and Compare Cushioning Materials (B. Jarimopas, S. Sayasoonthorn, S. P. Singh, and Jagjit Singh), May, 321

Aqueous solutions
Testing of Salt-Contaminated Materials: Use of Aqueous Solutions for Control of Relative Humidity (T. Diaz Gonçalves and M. Marinho Abreu), Sept., 529

Asphalt binder
Effect of Antistrip Additives on Surface Free Energy Characteristics of Asphalt Binders for Moisture-Induced Damage Potential (Nazimuddin M. Wasiuddin, Chris M. Fogle, Musharraf M. Zaman, and Edgar A. O'Rear), Jan., 36
Development of Double Edge Notched Tension (DENT) Test for Asphalt Binders

(Adam Zofka and Mihai Marasteanu), May, 259
Characterization of Thermal Degradation of Liquid Amine Anti-Strip Additives in Asphalt Binders due to RTFO and PAV-Aging (Nazimuddin M. Wasiuddin, Chris M. Fogle, Musharraf M. Zaman, and Edgar A. O'Rear), July, 387

Asphalt concrete
Anisotropy of Field-Compacted Asphalt Concrete Material (Yael Motola and Jacob Uzan), Jan., 103

Asphalt institute
Verification and Calibration of VESYS5W Fatigue Cracking Model Using Results from Accelerated Pavement Testing (Dar Hao Chen, Fujie Zhou, and Jianbo Yuan), Sept., 544

Asphalt mixture
Dynamic Modulus of Asphalt Mixtures for Development of Korean Pavement Design Guide (K. Lee, H. Kim, N. Kim, and Y. Kim), March, 143

Asphalt pavement
Evaluation of Nonnuclear Density Tests on Hot Mix Asphalt Segregation (Chieh-Min Chang, Jian-Shiuh Chen, Chien-Cheng Fang, and Meng-Kung Chang), Nov., 563

Asphalt rubber
Validation of Initial and Failure Stiffness Definitions in Flexure Fatigue Test for Hot Mix Asphalt (M. A. Abojaradeh, Matthew W. Witczak, Michael S. Mamlouk, and Kamil E. Kaloush), Jan., 95

ASTM D 4772
The Development of ASTM D 4772: The Water Flow Test Method (Richard T. Cary), Sept., 533

ASTM D 5433
The Development of ASTM D 4772: The Water Flow Test Method (Richard T. Cary), Sept., 533

Astroturf
An Apparatus to Evaluate the Pace of Baseball Field Playing Surfaces (James T. Brosnan, Andrew S. McNitt, and Maxim J. Schlossberg), Nov., 676

Automated ball indentation
An Evaluation of Stress-Strain Property Prediction by Automated Ball Indentation (ABI) testing (Raghu V Prakash and Chow Shing Shin), May, 221

B

Ball-indentation
Small Specimen Test Techniques for Estimating the Tensile Property Degradation of Mod 9Cr-1Mo Steel on Thermal Aging (V. Karthik, K. Laha, P. Parameswaran, K. V. Kasiviswanathan, and Baldev Raj), July, 438

Ballistic pendulum
Test Method to Evaluate Bruising During Impacts to Apples and Compare Cushioning Materials (B. Jarimopas, S. Sayasoonthorn, S. P. Singh, and Jagjit Singh), May, 321

Base
Effect of Antistrip Additives on Surface Free Energy Characteristics of Asphalt Binders for Moisture-Induced Damage Potential (Nazimuddin M. Wasiuddin, Chris M. Fogle, Musharraf M. Zaman, and Edgar A. O'Rear), Jan., 36
Characterization of Thermal Degradation of Liquid Amine Anti-Strip Additives in Asphalt Binders due to RTFO and PAV-Aging (Nazimuddin M. Wasiuddin, Chris M. Fogle, Musharraf M. Zaman, and Edgar A. O'Rear), July, 387

Base isolation effectiveness factor
Experimental Study for Evaluating Crack Retardation of Asphalt Concrete Overlays (Sukhanand S. Bhosale and Jnanendra N. Mandal), Nov., 589

Biaxial stress-strain relationship
Quantification of Constitutive Behavior of Sheet Metals Subjected to Dynamic Bulge Loading (L. Liu, N. Petrinic, B. Elliot, and C. Ruiz), Sept., 502

Biaxial tensile
A New Biaxial Tension Test Fixture for Uniaxial Testing Machine—A Validation for Hyperelastic Behavior of Rubber-Like Materials (M. Brieu, J. Diani, and N. Bhatnagar), July, 364

Bimaterial interface
Stress Intensity Formulas for Three-dimensional Cracks in the Vicinity of an Interface (Nao-Aki Noda and Bin Liang), March, 192

Bitumen
Bitumen Surface Energy Characterization by Inverse Gas Chromatography (Arno W. Hefer, Dallas N. Little, and Bruce E. Herbert), May, 233

Bitumen-aggregate adhesion
Bitumen Surface Energy Characterization by Inverse Gas Chromatography (Arno W. Hefer, Dallas N. Little, and Bruce E. Herbert), May, 233

Bituminous mixture
Evaluation of Nonnuclear Density Tests on Hot Mix Asphalt Segregation (Chieh-Min Chang, Jian-Shiuh Chen, Chien-Cheng Fang, and Meng-Kung Chang), Nov., 563

Blended sands
Deicer Salt Scaling Resistance of Concrete Containing Manufactured Sands (Ufuk Dilek and Michael L. Leming), March, 134

Blunting line
Crack Initiation Determination for Three-Point-Bend Specimens (Jan Džugan and Hans-Werner Viehrig), May, 245

Bottom mount instrumentation tube
Development of a Stress Corrosion Cracking Test Methodology Using Tube-shaped Specimens (Yasumoto Sato, Xue He, Yoichi Takeda, and Tetsuo Shoji), May, 254

Bounce
An Apparatus to Evaluate the Pace of Baseball Field Playing Surfaces (James T. Brosnan, Andrew S. McNitt, and Maxim J. Schlossberg), Nov., 676

Boundary conditions
Boundary Condition Role in Tests of Wood Compression Webs (Robert J. Leichti, Karl Kleemann, and Thomas H. Miller), Sept., 539

British pendulum number
Evaluation of Friction Performance of Coarse Aggregates and Hot-Mix Asphalt Pavements (Shuo Li, Karen Zhu, and Samy Noureldin), Nov., 571

Brown rot
Towards the Development of Accelerated Methods for Assessing the Durability of Wood Plastic Composites (Antonio Silva, Barbara L. Gartner, and Jeffrey J. Morrell), March, 203

Bruise volume
Test Method to Evaluate Bruising During Impacts to Apples and Compare Cushioning Materials (B. Jarimopas, S. Sayasoonthorn, S. P. Singh, and Jagjit Singh), May, 321

Building technology
Combination of Transient Plane Source and Slug Calorimeter Measurements to Estimate the Thermal Properties of Fire Resistive Materials (D. P. Bentz), May, 240

Bulk metal forming
Measurement of Strain Distribution and Material Flow in Bulk Deformation by the Screw Method (J. Zhang, S. J. Yuan, and Z. B. He), Sept., 496

C

Carbide coarsening
Small Specimen Test Techniques for Estimating the Tensile Property Degradation of Mod 9Cr-1Mo Steel on Thermal Aging (V. Karthik, K. Laha, P. Parameswaran, K. V. Kasiviswanathan, and Baldev Raj), July, 438

CARES/Life
Time-Dependent Reliability of Thermally Shocked SiC Tubes (Osama M. Jadaan, Noel N. Nemeth, and Albert E. Segall), Jan., 75

Cellulose
Evaluation of a Humidity Sensor for Use in an Environment Exposed to Radiation (Richard Brenner, Nils Bingefors, and Bjarte Mohn), Sept., 469

Circular hole
Calculation of Stress Fields Near Notch Roots in Real Life Structures Subjected to In-Plane and Out-of-Plane Deformations (Toyomitsu Harada and Hiroshi Noguchi), Jan., 10

Clothing
Assessment of Clothing Effects in Thermal Comfort Standards: A Review (Jianhua Huang), Sept., 455

Coarse aggregate
Quantification of Coarse Aggregate Surface Texture Using Image Analysis (Tongyan Pan and Erol Tutumluer), March, 177
Evaluation of Friction Performance of Coarse Aggregates and Hot-Mix Asphalt Pavements (Shuo Li, Karen Zhu, and Samy Noureldin), Nov., 571

Coefficient of restitution
An Apparatus to Evaluate the Pace of Baseball Field Playing Surfaces (James T. Brosnan, Andrew S. McNitt, and Maxim J. Schlossberg), Nov., 676

Cohesion
Evaluate the Simple Surface Energy of Aggregates Using the Capillary Rise Method (Dennis Sinkonde, Hao Pei Wen, and Xiao Qing Yi), Nov., 618

Compliance
Crack Initiation Determination for Three-Point-Bend Specimens (Jan Džugan and Hans-Werner Viehrig), May, 245

Composite
Short-Beam-Shear Testing of Composite Rings With Variable Cross Section as Representative for Full-scale Delamination (P. Samyn, L. Van Schepdael, J. S. Leendertz, W. Van Paepegem, P. De Baets, and J. Degrieck), May, 310

Computed tomography
Quality Assurance of Manufactures by Means of Intelligent Tomographic Processing (Rosana G. Barbuzza, Marcelo J. Vénere, and Alejandro Clausse), Jan., 59

Concrete strength
New Twist-Off Method for the Evaluation of In-Situ Strength of Concrete (M. Naderi), Nov., 602

Confocal imaging profiler
A Method for Evaluating Fretting Wear Scars in Thin Steel Roping Wires Based on Confocal Imaging Profilometry (M. A. Urchegui, W. Tato, and X. Gómez), July, 357

Conformity assessment
Ambiguities in Technical Standards—Case Study IEC 60112—Measuring the Resistance of Solid Isolating Materials to Tracking (Gaber Beges, Edo Stare, and Janko Drnovsek), March, 118

Contact angle
Effect of Antistrip Additives on Surface Free Energy Characteristics of Asphalt Binders for Moisture-Induced Damage Potential (Nazimuddin M. Wasiuddin, Chris M. Fogle, Musharraf M. Zaman, and Edgar A. O'Rear), Jan., 36
Characterization of Thermal Degradation of Liquid Amine Anti-Strip Additives in Asphalt Binders due to RTFO and PAV-Aging (Nazimuddin M. Wasiuddin, Chris M. Fogle, Musharraf M. Zaman, and Edgar A. O'Rear), July, 387

Contaminant transport
Accelerated Diffusion Test on the Intact Rock Mass (B. Hanumantha Rao, A. Dalinaidu, and D. N. Singh), March, 111

Control of relative humidity
Testing of Salt-Contaminated Materials: Use of Aqueous Solutions for Control of Relative Humidity (T. Diaz Gonçalves and M. Marinho Abreu), Sept., 529

COR
An Apparatus to Evaluate the Pace of Baseball Field Playing Surfaces (James T. Brosnan, Andrew S. McNitt, and Maxim J. Schlossberg), Nov., 676

Correlation
Small Specimen Test Techniques for Estimating the Tensile Property Degradation of Mod 9Cr-1Mo Steel on Thermal Aging (V. Karthik, K. Laha, P. Parameswaran, K. V. Kasiviswanathan, and Baldev Raj), July, 438

Corrosion
Uncertainties in Corrosion Rate Measurements of Fasteners Exposed to Treated Wood at 100 % Relative Humidity (Samuel L. Zelinka), Jan., 106

Crack
Stress Intensity Formulas for Three-dimensional Cracks in the Vicinity of an Interface (Nao-Aki Noda and Bin Liang), March, 192
Numerical Analysis of Rectangular Plate with Symmetric Edge Cracks and Edge Half-Circular Hole Cracks in Tension (Xiangqiao Yan), Sept., 557

Crack growth
Effect of Magnetic Field on Fatigue Crack Propagation of Single-Edge Cracked Soft Ferromagnetic Specimens under Mode I Loading (Yasuhide Shindo, Itaru Shindo, and Fumio Narita), March, 151

Crack initiation
Crack Initiation Determination for Three-Point-Bend Specimens (Jan Džugan and Hans-Werner Viehrig), May, 245

Crack length estimation
Influence of the Calibration Points on the S_{pb} Parameter Behavior (J. E. Wainstein, R. G. Cocco, L. A. de Vedia, and A. N. Cassanelli), Jan., 53

Crack relief interlayer
Using Rolling Dynamic Deflectometer and Overlay Tester to Determine the Reflective Cracking Potential (Dar-Hao Chen), Nov., 644

Crack retardation
Experimental Study for Evaluating Crack Retardation of Asphalt Concrete Overlays (Sukhanand S. Bhosale and Jnanendra N. Mandal), Nov., 589

Crack sealant
Development of a Viscosity Specification for Hot-Poured Bituminous Sealants (Imad L. Al-Qadi, Eli. H. Fini, Mostafa A. Elseifi, J-F. Masson, and Kevin M. McGhee), July, 395

Crack-tip element
Numerical Analysis of Rectangular Plate with Symmetric Edge Cracks and Edge Half-Circular Hole Cracks in Tension (Xiangqiao Yan), Sept., 557

Crashworthiness
Quantification of Constitutive Behavior of Sheet Metals Subjected to Dynamic Bulge Loading (L. Liu, N. Petrinic, B. Elliot, and C. Ruiz), Sept., 502

Creep
Tensile Creep Studies on Filled Polychloroprene Elastomer (F. Lacroix, A. Tougui, G. Berton, N. Ranganathan, and N. R. Neelakantan), July, 449
Flexural Creep Apparatus and Testing for Structural Composite Lumber (Robert Leichti, Milo Clauson, and Daniel Cheney), Sept., 553

Creep behavior
Characterization and Simulation of the Creep Behavior of P92 Sandwich Structures at 923 K with Loading Transverse to the Intermediate Layer (Essam El-Magd, Jürgen Gebhard, and Jan Stuhrmann), Jan., 20

Cushioning
Test Method to Evaluate Bruising During Impacts to Apples and Compare Cushioning Materials (B. Jarimopas, S. Sayasoonthorn, S. P. Singh, and Jagjit Singh), May, 321

D

Decay parameters
Experimental Study for Evaluating Crack

Retardation of Asphalt Concrete Overlays (Sukhanand S. Bhosale and Jnanendra N. Mandal), Nov., 589

Decreasing rate
Evaluation of Friction Performance of Coarse Aggregates and Hot-Mix Asphalt Pavements (Shuo Li, Karen Zhu, and Samy Noureldin), Nov., 571

Deicer salt scaling resistance
Deicer Salt Scaling Resistance of Concrete Containing Manufactured Sands (Ufuk Dilek and Michael L. Leming), March, 134

Density
Statistical Correlations Between Seismic Wave Velocities and SPT Blow Counts and the Relative Density of Soils (Emin U. Ulugergerli and Osman Uyanik), March, 187

Destructive and nondestructive testing
Nondestructive Testing for the Integrity Evaluation of Erosive and Abrasive Boundary Layers (Y. Meged), Nov., 634

Diametral compression
A Critical Review of the Diametral Compression Method for Determining the Tensile Strength of Spherical Aggregates (Walter G. Luscher, John R. Hellmann, Albert E. Segall, David L. Shelleman, and Barry E. Scheetz), Nov., 624

Differential deflection
Experimental Study for Evaluating Crack Retardation of Asphalt Concrete Overlays (Sukhanand S. Bhosale and Jnanendra N. Mandal), Nov., 589

Diffusion
Accelerated Diffusion Test on the Intact Rock Mass (B. Hanumantha Rao, A. Dalinaidu, and D. N. Singh), March, 111

Direct pole figure
Texture Evaluation in Zr-2.5 % Nb Pressure Tubes Using Kearn's *f* Parameter (K. Kapoor, C. Padmaprabu, S. V. Ramana Rao, T. Sanyal, and B. P. Kashyap), May, 327

Displacement discontinuity
Numerical Analysis of Rectangular Plate with Symmetric Edge Cracks and Edge Half-Circular Hole Cracks in Tension (Xiangqiao Yan), Sept., 557
A New Numerical Analysis for Rectangular Tensile Sheet with Single Edge Crack by Boundary Elements (Xiangqiao Yan), Nov., 682

Displacement function
Calculation of Stress Fields Near Notch Roots in Real Life Structures Subjected to In-Plane and Out-of-Plane Deformations (Toyomitsu Harada and Hiroshi Noguchi), Jan., 10

Drilling
Monitoring Hole Quality in a Drilling Process Using a Fuzzy Subtractive Clustering-based System Identification Method (Mohammed T. Hayajneh and Saleh. M. Radaideh), May, 297

Drops
Measurement, Analysis, and Comparison of the Parcel Shipping Shock and Drop Environment of the United States Postal Service with Commercial Carriers (J. Singh, S. P. Singh, G. Burgess, and K. Saha), July, 424

Drucker-Prager failure envelope
Laboratory-based Unified Permanent Deformation Model for Hot-Mix Asphalt Mixtures (Elie Y. Hajj, Raj V. Siddharthan, Peter E. Sebaaly, and Dean Weitzel), May, 272

Duplex stainless steel
An Evaluation of Stress-Strain Property Prediction by Automated Ball Indentation (ABI) testing (Raghu V Prakash and Chow Shing Shin), May, 221

Duration of load
Flexural Creep Apparatus and Testing for Structural Composite Lumber (Robert Leichti, Milo Clauson, and Daniel Cheney), Sept., 553

Dynamic bending test
Dynamic Fracture-Initiation Toughness Determination of Al 7075-T651 Aluminum Alloy (J. A. Loya and J. Fernández-Sáez), Jan., 25

Dynamic bulge test
Quantification of Constitutive Behavior of Sheet Metals Subjected to Dynamic Bulge Loading (L. Liu, N. Petrinic, B. Elliot, and C. Ruiz), Sept., 502

Dynamic coefficients
A Journal Bearing Test Rig with Reduced Uncertainty: Some Design Considerations (D. Wale and D. Mba), July, 349

Dynamic initiation toughness
Dynamic Fracture-Initiation Toughness Determination of Al 7075-T651 Aluminum Alloy (J. A. Loya and J. Fernández-Sáez), Jan., 25

Dynamic modulus
Dynamic Modulus of Asphalt Mixtures for Development of Korean Pavement Design Guide (K. Lee, H. Kim, N. Kim, and Y. Kim), March, 143

Dynamic Wilhelmy plate method
Effect of Antistrip Additives on Surface Free Energy Characteristics of Asphalt Binders for Moisture-Induced Damage Potential (Nazimuddin M. Wasiuddin, Chris M. Fogle, Musharraf M. Zaman, and Edgar A. O'Rear), Jan., 36
Characterization of Thermal Degradation of Liquid Amine Anti-Strip Additives in Asphalt Binders due to RTFO and PAV-Aging (Nazimuddin M. Wasiuddin, Chris M. Fogle, Musharraf M. Zaman, and Edgar A. O'Rear), July, 387

E

Elasticity
Effect of Magnetic Field on Fatigue Crack Propagation of Single-Edge Cracked Soft Ferromagnetic Specimens under Mode I Loading (Yasuhide Shindo, Itaru Shindo, and Fumio Narita), March, 151

Elastomer
Tensile Creep Studies on Filled Polychloroprene Elastomer (F. Lacroix, A. Tougui, G. Berton, N. Ranganathan, and N. R. Neelakantan), July, 449

Electric field
Accelerated Diffusion Test on the Intact Rock Mass (B. Hanumantha Rao, A. Dalinaidu, and D. N. Singh), March, 111

Elevated temperature
Experimental Technique for Fully-Reversed Low-Cycle Fatigue Testing of Thin Metallic Foils (D. Yang and J. W. Holmes), July, 404

Embrittlement
Reconstitution Process by Stud Welding for the Surveillance Program in Mexico (Jesús Romero, Rogelio Hernández, Filiberto Fernández, Fortino Mercado, and Eric van Walle), Sept., 514

Erosion and dilation
Quantification of Coarse Aggregate Surface Texture Using Image Analysis (Tongyan Pan and Erol Tutumluer), March, 177

Erosive boundary layer
Nondestructive Testing for the Integrity Evaluation of Erosive and Abrasive Boundary Layers (Y. Meged), Nov., 634

Experimental stress analysis
Calculation of Stress Fields Near Notch Roots in Real Life Structures Subjected to In-Plane and Out-of-Plane Deformations (Toyomitsu Harada and Hiroshi Noguchi), Jan., 10

Experimental testing
A Journal Bearing Test Rig with Reduced Uncertainty: Some Design Considerations (D. Wale and D. Mba), July, 349

Exposure test
Uncertainties in Corrosion Rate Measurements of Fasteners Exposed to Treated Wood at 100 % Relative Humidity (Samuel L. Zelinka), Jan., 106

F

Fabric effectiveness factor
Experimental Study for Evaluating Crack Retardation of Asphalt Concrete Overlays (Sukhanand S. Bhosale and Jnanendra N. Mandal), Nov., 589

Factor of safety
Laboratory-based Unified Permanent Deformation Model for Hot-Mix Asphalt Mixtures (Elie Y. Hajj, Raj V. Siddharthan, Peter E. Sebaaly, and Dean Weitzel), May, 272

Failure analysis
Quality Assurance of Manufactures by Means of Intelligent Tomographic Processing (Rosana G. Barbuzza, Marcelo J. Vénere, and Alejandro Clausse), Jan., 59

Failure stiffness
Validation of Initial and Failure Stiffness Definitions in Flexure Fatigue Test for Hot Mix Asphalt (M. A. Abojaradeh, Matthew W. Witczak, Michael S. Mamlouk, and Kamil E. Kaloush), Jan., 95

Falling Weight Deflectometer
Using Nondestructive Testing Technologies to Assist in Selecting the Optimal Pavement Rehabilitation Strategy (Dar Hao Chen and Tom Scullion), March, 211

Fatigue
Effect of Magnetic Field on Fatigue Crack Propagation of Single-Edge Cracked Soft Ferromagnetic Specimens under Mode I Loading (Yasuhide Shindo, Itaru Shindo, and Fumio Narita), March, 151
Fatigue Prediction of Lightweight Thermoplastic Fiber-Metal Laminates (H. Kang and G. Reyes-Villanueva), May, 266
Experimental Technique for Fully-Reversed Low-Cycle Fatigue Testing of Thin Metallic Foils (D. Yang and J. W. Holmes), July, 404

Fatigue crack propagation
Crack Growth Behavior in Overloaded Specimens with Sharp Notch in Low Carbon Steel (Anindito Purnowidodo, Shingo Fukuzato, Akihide Saimoto, and Chobin Makabe), Sept., 463

Fatigue cracking
Verification and Calibration of VESYS5W Fatigue Cracking Model Using Results from Accelerated Pavement Testing (Dar Hao Chen, Fujie Zhou, and Jianbo Yuan), Sept., 544

Fatigue failure criteria
Validation of Initial and Failure Stiffness Definitions in Flexure Fatigue Test for Hot Mix Asphalt (M. A. Abojaradeh, Matthew W. Witczak, Michael S. Mamlouk, and Kamil E. Kaloush), Jan., 95

Fatigue limit
Comparison of Different Methods for Fatigue Limit Evaluation by Means of the Monte Carlo Method (Giangiacomo Minak), March, 126

Fatigue prediction
Fatigue Prediction of Lightweight Thermoplastic Fiber-Metal Laminates (H. Kang and G. Reyes-Villanueva), May, 266

Fatigue resistance
Determination of the Fatigue Resistance of HVOF Thermal Spray WC-CoCr Coatings by Means of Impact Testing (Constantine David, Konstantinos Anthymidis, Pavlos Agrianidis, and Dimitrios Tsipas), Nov., 630

Fatigue strength
Laser Welding Conditions to Improve Tensile Strength and Fatigue Strength of a Lap Joint in Aluminum Alloys (Kyohei Kawamoto, Shintaro Yoshimitsu, Hiroshi Noguchi, and Tatsuhiko Yoshimura), July, 416

Fault diagnosis
Fault Classification of Water Hydraulic System by Vibration Analysis with Support Vector Machine (H. X. Chen, Patrick S. K. Chua, and G. H. Lim), July, 408

Fault features extraction
Gearbox Fault Feature Extraction Using Hilbert Transform, S-Transform, and a Statistical Indicator (Xianfeng Fan and Ming J. Zuo), Sept., 477

Feature extraction
Fault Classification of Water Hydraulic System by Vibration Analysis with Support Vector Machine (H. X. Chen, Patrick S. K. Chua, and G. H. Lim), July, 408

Feature indicator
Gearbox Fault Feature Extraction Using Hilbert Transform, S-Transform, and a Statistical Indicator (Xianfeng Fan and Ming J. Zuo), Sept., 477

FEM simulation
Characterization and Simulation of the Creep Behavior of P92 Sandwich Structures at 923 K with Loading Transverse to the Intermediate Layer (Essam El-Magd, Jürgen Gebhard, and Jan Stuhrmann), Jan., 20

Fiber-reinforced polymer (FRP)
New Method for Testing Fiber-reinforced Polymer Rods Under Flexure (Burong Zhang, Radhouane Masmoudi, and Brahim Benmokrane), March, 171

Field-compacted specimen
Anisotropy of Field-Compacted Asphalt Concrete Material (Yael Motola and Jacob Uzan), Jan., 103

Fieldturf
An Apparatus to Evaluate the Pace of Baseball Field Playing Surfaces (James T. Brosnan, Andrew S. McNitt, and Maxim J. Schlossberg), Nov., 676

Findley equation
Tensile Creep Studies on Filled Polychloroprene Elastomer (F. Lacroix, A. Tougui, G. Berton, N. Ranganathan, and N. R. Neelakantan), July, 449

Fines content
Deicer Salt Scaling Resistance of Concrete Containing Manufactured Sands (Ufuk Dilek and Michael L. Leming), March, 134

Finite element analysis
Time-Dependent Reliability of Thermally Shocked SiC Tubes (Osama M. Jadaan, Noel N. Nemeth, and Albert E. Segall), Jan., 75

Finite elements
Short-Beam-Shear Testing of Composite Rings With Variable Cross Section as Representative for Full-scale Delamination (P. Samyn, L. Van Schepdael, J. S. Leendertz, W. Van Paepegem, P. De Baets, and J. Degrieck), May, 310

Fire costs
Missionary Ridge Fire Cost Assessment (Kurt H. Mackes, Dennis L. Lynch, Stephen K. Kelly, and Mike Eckhoff), March, 167

Fire resistive material
Combination of Transient Plane Source and Slug Calorimeter Measurements to Estimate the Thermal Properties of Fire Resistive Materials (D. P. Bentz), May, 240

Flexural beam fatigue
Validation of Initial and Failure Stiffness Definitions in Flexure Fatigue Test for Hot Mix Asphalt (M. A. Abojaradeh, Matthew W. Witczak, Michael S. Mamlouk, and Kamil E. Kaloush), Jan., 95

Flexural creep
Flexural Creep Apparatus and Testing for Structural Composite Lumber (Robert Leichti, Milo Clauson, and Daniel Cheney), Sept., 553

Flexural strength
New Method for Testing Fiber-reinforced Polymer Rods Under Flexure (Burong Zhang, Radhouane Masmoudi, and Brahim Benmokrane), March, 171

Foil
Experimental Technique for Fully-Reversed Low-Cycle Fatigue Testing of Thin Metallic Foils (D. Yang and J. W. Holmes), July, 404

Four-parameter equation
Tensile Creep Studies on Filled Polychloroprene Elastomer (F. Lacroix, A. Tougui, G. Berton, N. Ranganathan, and N. R. Neelakantan), July, 449

Fractional deflection
Flexural Creep Apparatus and Testing for Structural Composite Lumber (Robert Leichti, Milo Clauson, and Daniel Cheney), Sept., 553

Fracture
A Test Method to Determine Low-Cycle-Fatigue Behavior of Wrinkled Pipe (Sreekanta Das, J. J. Roger Cheng, and David W. Murray), Jan., 1
Reconstitution Process by Stud Welding for

the Surveillance Program in Mexico (Jesús Romero, Rogelio Hernández, Filiberto Fernández, Fortino Mercado, and Eric van Walle), Sept., 514

Fracture mechanics
Influence of the Calibration Points on the S_{pb} Parameter Behavior (J. E. Wainstein, R. G. Cocco, L. A. de Vedia, and A. N. Cassanelli), Jan., 53
Time-Dependent Reliability of Thermally Shocked SiC Tubes (Osama M. Jadaan, Noel N. Nemeth, and Albert E. Segall), Jan., 75
Stress Intensity Formulas for Three-dimensional Cracks in the Vicinity of an Interface (Nao-Aki Noda and Bin Liang), March, 192

Fracture test
Development of Double Edge Notched Tension (DENT) Test for Asphalt Binders (Adam Zofka and Mihai Marasteanu), May, 259

Fracture toughness
Crack Initiation Determination for Three-Point-Bend Specimens (Jan Džugan and Hans-Werner Viehrig), May, 245
Development of Double Edge Notched Tension (DENT) Test for Asphalt Binders (Adam Zofka and Mihai Marasteanu), May, 259

Fresh-cut fruit
Testing and Evaluation of Quality Changes of Treated Fresh-Cut Tropical Fruits Packaged in Thermoformed Plastic Containers (S. Paul Singh, V. Chonhenchob, Y. Chantarasomboon, and J. Singh), Sept., 522

Fretting
A Method for Evaluating Fretting Wear Scars in Thin Steel Roping Wires Based on Confocal Imaging Profilometry (M. A. Urchegui, W. Tato, and X. Gómez), July, 357

Friction performance
Evaluation of Friction Performance of Coarse Aggregates and Hot-Mix Asphalt Pavements (Shuo Li, Karen Zhu, and Samy Noureldin), Nov., 571

Frost durability
Deicer Salt Scaling Resistance of Concrete Containing Manufactured Sands (Ufuk Dilek and Michael L. Leming), March, 134

Full-scale
Short-Beam-Shear Testing of Composite Rings With Variable Cross Section as Representative for Full-scale Delamination (P. Samyn, L. Van Schepdael, J. S. Leendertz, W. Van Paepegem, P. De Baets, and J. Degrieck), May, 310

Furniture loading
A Biaxial Load Cell Design for Simultaneous Measurement of Horizontal and Vertical Spring Forces in Sinuous Spring-Supported Seating (Bob Tackett and Jilei Zhang), July, 339

Fuzzy
Monitoring Hole Quality in a Drilling Process Using a Fuzzy Subtractive Clustering-based System Identification Method (Mohammed T. Hayajneh and Saleh. M. Radaideh), May, 297

G

Gap width
Laser Welding Conditions to Improve Tensile Strength and Fatigue Strength of a Lap Joint in Aluminum Alloys (Kyohei Kawamoto, Shintaro Yoshimitsu, Hiroshi Noguchi, and Tatsuhiko Yoshimura), July, 416

Gearbox
Gearbox Fault Feature Extraction Using Hilbert Transform, S-Transform, and a Statistical Indicator (Xianfeng Fan and Ming J. Zuo), Sept., 477

Geometry
Methodology for Evaluating Candidate Geometric Reference Scaffolds (Joy P. Dunkers, Stefan D. Leigh, David Dean, Malcolm N. Cooke, Richard A. Ketcham, and Marcus T. Cicerone), Nov., 668

Gloeophyllum trabeum
Towards the Development of Accelerated Methods for Assessing the Durability of Wood Plastic Composites (Antonio Silva, Barbara L. Gartner, and Jeffrey J. Morrell), March, 203

Graphite/epoxy composites
An Experimentally-Based Analytical Model of the Stress Field in an Iosipescu Composite Test Specimen (Jennifer M. Bell and Edwin M. Odom), July, 381

Ground Penetrating Radar (GPR)
Using Nondestructive Testing Technologies to Assist in Selecting the Optimal Pavement Rehabilitation Strategy (Dar Hao Chen and Tom Scullion), March, 211

H

Heat capacity
Combination of Transient Plane Source and Slug Calorimeter Measurements to Estimate the Thermal Properties of Fire Resistive Materials (D. P. Bentz), May, 240

Heat input
Laser Welding Conditions to Improve Tensile Strength and Fatigue Strength of a Lap Joint in Aluminum Alloys (Kyohei Kawamoto, Shintaro Yoshimitsu, Hiroshi Noguchi, and Tatsuhiko Yoshimura), July, 416

High strain rate
Dynamic Testing of Materials with the Rotating Disk Indirect Bar-Bar Tensile Impact Apparatus (Yuanming Xia and Yang Wang), Jan., 31

High-density polyethylene
Towards the Development of Accelerated Methods for Assessing the Durability of Wood Plastic Composites (Antonio Silva, Barbara L. Gartner, and Jeffrey J. Morrell), March, 203

High-speed photography
Dynamic Fracture-Initiation Toughness Determination of Al 7075-T651 Aluminum Alloy (J. A. Loya and J. Fernández-Sáez), Jan., 25

Hilbert transform
Gearbox Fault Feature Extraction Using Hilbert Transform, S-Transform, and a Statistical Indicator (Xianfeng Fan and Ming J. Zuo), Sept., 477

Hole quality
Monitoring Hole Quality in a Drilling Process Using a Fuzzy Subtractive Clustering-based System Identification Method (Mohammed T. Hayajneh and Saleh. M. Radaideh), May, 297

Hole size variation
Monitoring Hole Quality in a Drilling Process Using a Fuzzy Subtractive Clustering-based System Identification Method (Mohammed T. Hayajneh and Saleh. M. Radaideh), May, 297

Hot mix asphalt
Validation of Initial and Failure Stiffness Definitions in Flexure Fatigue Test for Hot Mix Asphalt (M. A. Abojaradeh, Matthew W. Witczak, Michael S. Mamlouk, and Kamil E. Kaloush), Jan., 95

Hot-mix asphalt mixture
Evaluation of Friction Performance of Coarse Aggregates and Hot-Mix Asphalt Pavements (Shuo Li, Karen Zhu, and Samy Noureldin), Nov., 571

Humidity sensor
Evaluation of a Humidity Sensor for Use in an Environment Exposed to Radiation (Richard Brenner, Nils Bingefors, and Bjarte Mohn), Sept., 469

HVOF thermal spray coatings
Determination of the Fatigue Resistance of HVOF Thermal Spray WC-CoCr Coatings by Means of Impact Testing (Constantine David, Konstantinos Anthymidis, Pavlos Agrianidis, and Dimitrios Tsipas), Nov., 630

Hyperelastic
A New Biaxial Tension Test Fixture for Uniaxial Testing Machine—A Validation for Hyperelastic Behavior of Rubber-Like Materials (M. Brieu, J. Diani, and N. Bhatnagar), July, 364

I

IEC 60112
Ambiguities in Technical Standards—Case Study IEC 60112—Measuring the Resistance of Solid Isolating Materials to Tracking (Gaber Beges, Edo Stare, and Janko Drnovsek), March, 118

Image analysis
Quantification of Coarse Aggregate Surface Texture Using Image Analysis (Tongyan Pan and Erol Tutumluer), March, 177

Imaging
Relationship of Aggregate Microtexture to Asphalt Pavement Skid Resistance (Anthony Luce, Enad Mahmoud, Eyad Masad, and Arif Chowdhury), Nov., 578

Impact energy
Test Method to Evaluate Bruising During Impacts to Apples and Compare Cushioning Materials (B. Jarimopas, S. Sayasoonthorn, S. P. Singh, and Jagjit Singh), May, 321

Impact testing
Determination of the Fatigue Resistance of HVOF Thermal Spray WC-CoCr Coatings by Means of Impact Testing (Constantine David, Konstantinos Anthymidis, Pavlos Agrianidis, and Dimitrios Tsipas), Nov., 630

In situ testing
New Twist-Off Method for the Evaluation of In-Situ Strength of Concrete (M. Naderi), Nov., 602

In-plane deformation
Calculation of Stress Fields Near Notch Roots in Real Life Structures Subjected to In-Plane and Out-of-Plane Deformations (Toyomitsu Harada and Hiroshi Noguchi), Jan., 10

Initial mix temperature
A Very Early Strength Concrete for Highway Construction (Sun Punurai, Wonsiri Punurai, and Cheng-Tzu Thomas Hsu), Nov., 609

Initial stiffness
Validation of Initial and Failure Stiffness Definitions in Flexure Fatigue Test for Hot Mix Asphalt (M. A. Abojaradeh, Matthew W. Witczak, Michael S. Mamlouk, and Kamil E. Kaloush), Jan., 95

Inspection
Quality Assurance of Manufactures by Means of Intelligent Tomographic Processing (Rosana G. Barbuzza, Marcelo J. Vénere, and Alejandro Clausse), Jan., 59

Intact rock mass
Accelerated Diffusion Test on the Intact Rock Mass (B. Hanumantha Rao, A. Dalinaidu, and D. N. Singh), March, 111

Integral J
Influence of the Calibration Points on the S_{pb} Parameter Behavior (J. E. Wainstein, R. G. Cocco, L. A. de Vedia, and A. N. Cassanelli), Jan., 53

Interlaminar shear
V-Notched Shear Specimens for the Inclined Double Notch Shear Test (Kaj B. Petterson, Jonas M. Neumeister, and Morten Strandberg), Jan., 85

Inverse gas chromatography
Bitumen Surface Energy Characterization by Inverse Gas Chromatography (Arno W. Hefer, Dallas N. Little, and Bruce E. Herbert), May, 233

Inverse pole figure
Texture Evaluation in Zr-2.5 % Nb Pressure Tubes Using Kearn's f Parameter (K. Kapoor, C. Padmaprabu, S. V. Ramana Rao, T. Sanyal, and B. P. Kashyap), May, 327

Iosipescu shear testing
An Experimentally-Based Analytical Model of the Stress Field in an Iosipescu Composite Test Specimen (Jennifer M. Bell and Edwin M. Odom), July, 381

J

Jointed concrete pavement
Using Rolling Dynamic Deflectometer and Overlay Tester to Determine the Reflective Cracking Potential (Dar-Hao Chen), Nov., 644

Journal bearing
A Journal Bearing Test Rig with Reduced Uncertainty: Some Design Considerations (D. Wale and D. Mba), July, 349

K

Kearn's f' parameter
Texture Evaluation in Zr-2.5 % Nb Pressure Tubes Using Kearn's f Parameter (K. Kapoor, C. Padmaprabu, S. V. Ramana Rao, T. Sanyal, and B. P. Kashyap), May, 327

L

Lap joint
Laser Welding Conditions to Improve Tensile Strength and Fatigue Strength of a Lap Joint in Aluminum Alloys (Kyohei Kawamoto, Shintaro Yoshimitsu, Hiroshi Noguchi, and Tatsuhiko Yoshimura), July, 416

Large deformation
Measuring Stress Strain Curves to Large Strains on Sheet Metal (A. Bacha, M. Feuerstein, Ch. Desrayaud, and H. Klöcker), March, 157

Large deformation
A New Biaxial Tension Test Fixture for Uniaxial Testing Machine—A Validation for Hyperelastic Behavior of Rubber-Like Materials (M. Brieu, J. Diani, and N. Bhatnagar), July, 364

Laser welding
Laser Welding Conditions to Improve Tensile Strength and Fatigue Strength of a Lap Joint in Aluminum Alloys (Kyohei Kawamoto, Shintaro Yoshimitsu, Hiroshi Noguchi, and Tatsuhiko Yoshimura), July, 416

Lifetime prediction
Methodology of Lifetime Prediction in Polymer Aging (J. Verdu, X. Colin, B. Fayolle, and L. Audouin), May, 289

Load-path dependency
Pavement Deformation Characteristics under Repeated Aircraft Loading with Fixed Wander Sequence (Kasthurirangan Gopalakrishnan, Franco Gomez-Ramirez, and Marshall R. Thompson), July, 429

Low cycle fatigue
A Test Method to Determine Low-Cycle-Fatigue Behavior of Wrinkled Pipe (Sreekanta Das, J. J. Roger Cheng, and David W. Murray), Jan., 1

M

Magnetoelastic analysis
Effect of Magnetic Field on Fatigue Crack Propagation of Single-Edge Cracked Soft Ferromagnetic Specimens under Mode I Loading (Yasuhide Shindo, Itaru Shindo, and Fumio Narita), March, 151

Manufactured fine aggregate
Deicer Salt Scaling Resistance of Concrete Containing Manufactured Sands (Ufuk Dilek and Michael L. Leming), March, 134

Manufactured sand
Deicer Salt Scaling Resistance of Concrete Containing Manufactured Sands (Ufuk Dilek and Michael L. Leming), March, 134

Maple
Towards the Development of Accelerated Methods for Assessing the Durability of Wood Plastic Composites (Antonio Silva, Barbara L. Gartner, and Jeffrey J. Morrell), March, 203

Master curve
Dynamic Modulus of Asphalt Mixtures for Development of Korean Pavement Design Guide (K. Lee, H. Kim, N. Kim, and Y. Kim), March, 143

Material flow
Measurement of Strain Distribution and Material Flow in Bulk Deformation by the Screw Method (J. Zhang, S. J. Yuan, and Z. B. He), Sept., 496

Material testing
Effect of Magnetic Field on Fatigue Crack Propagation of Single-Edge Cracked Soft Ferromagnetic Specimens under Mode I Loading (Yasuhide Shindo, Itaru Shindo, and Fumio Narita), March, 151

Maturity method
A Very Early Strength Concrete for Highway Construction (Sun Punurai, Wonsiri Punurai, and Cheng-Tzu Thomas Hsu), Nov., 609

Measurement
Measurement, Analysis, and Comparison of the Parcel Shipping Shock and Drop Environment of the United States Postal Service with Commercial Carriers (J. Singh, S. P. Singh, G. Burgess, and K. Saha), July, 424

Mechanical properties
Production of Aluminum-Silicon Carbide Composites Using Powder Metallurgy at Sintering Temperatures above the Aluminum Melting Point (W. M. Khairaldien, A. A. Khalil, and M. R. Bayoumi), Nov., 655

Mechanistic-empirical pavement design guide
Verification and Calibration of VESYS5W Fatigue Cracking Model Using Results from Accelerated Pavement Testing (Dar Hao Chen, Fujie Zhou, and Jianbo Yuan), Sept., 544

Medical device
A New Methodology for Whole-Package Microbial Challenge Testing for Medical Device Trays (Jane Severin, Laura Bix, John Linz, Dennis Gilliland, and Hugh Lockhart), July, 373

Methodology
Methodology of Lifetime Prediction in Polymer Aging (J. Verdu, X. Colin, B. Fayolle, and L. Audouin), May, 289

Micro-Deval
Relationship of Aggregate Microtexture to Asphalt Pavement Skid Resistance (Anthony Luce, Enad Mahmoud, Eyad Masad, and Arif Chowdhury), Nov., 578

Microbial challenge
A New Methodology for Whole-Package Microbial Challenge Testing for Medical Device Trays (Jane Severin, Laura Bix, John Linz, Dennis Gilliland, and Hugh Lockhart), July, 373

Mineral admixtures
Deicer Salt Scaling Resistance of Concrete Containing Manufactured Sands (Ufuk Dilek and Michael L. Leming), March, 134

Missionary Ridge Fire
Missionary Ridge Fire Cost Assessment (Kurt H. Mackes, Dennis L. Lynch, Stephen K. Kelly, and Mike Eckhoff), March, 167

Mixed mode
Experimental Study for Evaluating Crack Retardation of Asphalt Concrete Overlays (Sukhanand S. Bhosale and Jnanendra N. Mandal), Nov., 589

Modeling
Verification and Calibration of VESYS5W Fatigue Cracking Model Using Results from Accelerated Pavement Testing (Dar Hao Chen, Fujie Zhou, and Jianbo Yuan), Sept., 544

Modified 9Cr-1Mo steel
Small Specimen Test Techniques for Estimating the Tensile Property Degradation of Mod 9Cr-1Mo Steel on Thermal Aging (V. Karthik, K. Laha, P. Parameswaran, K. V. Kasiviswanathan, and Baldev Raj), July, 438

Modified atmosphere
Testing and Evaluation of Quality Changes of Treated Fresh-Cut Tropical Fruits Packaged in Thermoformed Plastic Containers (S. Paul Singh, V. Chonhenchob, Y. Chantarasomboon, and J. Singh), Sept., 522

Modified Hopkinson pressure bar
Dynamic Fracture-Initiation Toughness Determination of Al 7075-T651 Aluminum Alloy (J. A. Loya and J. Fernández-Sáez), Jan., 25

Modulus of elasticity
New Method for Testing Fiber-reinforced Polymer Rods Under Flexure (Burong Zhang, Radhouane Masmoudi, and Brahim Benmokrane), March, 171

Moisture sensitivity
Evaluate the Simple Surface Energy of Aggregates Using the Capillary Rise Method (Dennis Sinkonde, Hao Pei Wen, and Xiao Qing Yi), Nov., 618

Moisture-induced damage
Effect of Antistrip Additives on Surface Free Energy Characteristics of Asphalt Binders for Moisture-Induced Damage Potential (Nazimuddin M. Wasiuddin, Chris M. Fogle, Musharraf M. Zaman, and Edgar A. O'Rear), Jan., 36

Monitoring technologies
History and Accomplishments of the U.S. Environmental Protection Agency's Superfund Innovative Technology Evaluation (SITE) Monitoring and Measurement Technology (MMT) Program (Stephen Billets and Amy Dindal), Sept., 486

Monte Carlo simulation
Comparison of Different Methods for Fatigue Limit Evaluation by Means of the Monte Carlo Method (Giangiacomo Minak), March, 126

Multi-depth deflectometer (MDD)
Pavement Deformation Characteristics under Repeated Aircraft Loading with Fixed Wander Sequence (Kasthurirangan Gopalakrishnan, Franco Gomez-Ramirez, and Marshall R. Thompson), July, 429

N

NAPTF
Pavement Deformation Characteristics under Repeated Aircraft Loading with Fixed Wander Sequence (Kasthurirangan Gopalakrishnan, Franco Gomez-Ramirez, and Marshall R. Thompson), July, 429

Neural network
Fault Classification of Water Hydraulic System by Vibration Analysis with Support Vector Machine (H. X. Chen, Patrick S. K. Chua, and G. H. Lim), July, 408

Next-day and second-day shipping
Measurement, Analysis, and Comparison of the Parcel Shipping Shock and Drop Environment of the United States Postal Service with Commercial Carriers (J. Singh, S. P. Singh, G. Burgess, and K. Saha), July, 424

Ni-base
Experimental Technique for Fully-Reversed Low-Cycle Fatigue Testing of Thin Metallic Foils (D. Yang and J. W. Holmes), July, 404

Nickel-based alloy 600
Development of a Stress Corrosion Cracking Test Methodology Using Tube-shaped Specimens (Yasumoto Sáto, Xue He, Yoichi Takeda, and Tetsuo Shoji), May, 254

Non-Newtonian fluid
Development of a Viscosity Specification for Hot-Poured Bituminous Sealants (Imad L. Al-Qadi, Eli. H. Fini, Mostafa A. Elseifi, J-F. Masson, and Kevin M. McGhee), July, 395

Nondestructive stress measurements
Stress Evaluation of Railroad Forged Wheels by Ultrasonic Testing (Domingos José Minicuci, Auteliano Antunes dos Santos Júnior, Marcílio H. Andrino, and Francisco de Carvalho Santos), Jan., 66

Nondestructive testing
Quality Assurance of Manufactures by Means of Intelligent Tomographic Processing (Rosana G. Barbuzza, Marcelo J. Vénere, and Alejandro Clausse), Jan., 59
Using Nondestructive Testing Technologies to Assist in Selecting the Optimal Pavement Rehabilitation Strategy (Dar Hao Chen and Tom Scullion), March, 211

Nonnuclear density
Evaluation of Nonnuclear Density Tests on Hot Mix Asphalt Segregation (Chieh-Min Chang, Jian-Shiuh Chen, Chien-Cheng Fang, and Meng-Kung Chang), Nov., 563

Nonprismatic column
Boundary Condition Role in Tests of Wood Compression Webs (Robert J. Leichti, Karl Kleemann, and Thomas H. Miller), Sept., 539

Notch
Calculation of Stress Fields Near Notch Roots in Real Life Structures Subjected to In-Plane and Out-of-Plane Deformations (Toyomitsu Harada and Hiroshi Noguchi), Jan., 10
V-Notched Shear Specimens for the Inclined Double Notch Shear Test (Kaj B. Petterson, Jonas M. Neumeister, and Morten Strandberg), Jan., 85

Notched specimen
Crack Growth Behavior in Overloaded Specimens with Sharp Notch in Low Carbon Steel (Anindito Purnowidodo, Shingo Fukuzato, Akihide Saimoto, and Chobin Makabe), Sept., 463

O

Oblique
V-Notched Shear Specimens for the Inclined Double Notch Shear Test (Kaj B. Petterson, Jonas M. Neumeister, and Morten Strandberg), Jan., 85

One-sigma limit
Methodology of Assessing Testing Variation for Volumetric Quantities in Hot Mix Asphalt Production (Terhi Pellinen and Thomas Kuczek), May, 281

Open graded asphalt concrete
Experimental Study for Evaluating Crack Retardation of Asphalt Concrete Overlays (Sukhanand S. Bhosale and Jnanendra N. Mandal), Nov., 589

Open-graded friction course
Evaluation of Friction Performance of Coarse Aggregates and Hot-Mix Asphalt Pavements (Shuo Li, Karen Zhu, and Samy Noureldin), Nov., 571

Opening mode
Experimental Study for Evaluating Crack Retardation of Asphalt Concrete Overlays (Sukhanand S. Bhosale and Jnanendra N. Mandal), Nov., 589

Optimized specimen
V-Notched Shear Specimens for the Inclined Double Notch Shear Test (Kaj B. Petterson, Jonas M. Neumeister, and Morten Strandberg), Jan., 85

Out-of-plane deformation
Calculation of Stress Fields Near Notch Roots in Real Life Structures Subjected to In-Plane and Out-of-Plane Deformations (Toyomitsu Harada and Hiroshi Noguchi), Jan., 10

Overlay tester
Using Rolling Dynamic Deflectometer and Overlay Tester to Determine the Reflective Cracking Potential (Dar-Hao Chen), Nov., 644

Overload
Crack Growth Behavior in Overloaded Specimens with Sharp Notch in Low Carbon Steel (Anindito Purnowidodo, Shingo Fukuzato, Akihide Saimoto, and Chobin Makabe), Sept., 463

Oversize error
Monitoring Hole Quality in a Drilling Process Using a Fuzzy Subtractive Clustering-based System Identification Method (Mohammed T. Hayajneh and Saleh. M. Radaideh), May, 297

P

P-wave
Statistical Correlations Between Seismic Wave Velocities and SPT Blow Counts and the Relative Density of Soils (Emin U. Ulugergerli and Osman Uyanik), March, 187

P92
Characterization and Simulation of the Creep Behavior of P92 Sandwich Structures at 923 K with Loading Transverse to the Intermediate Layer (Essam El-Magd, Jürgen Gebhard, and Jan Stuhrmann), Jan., 20

Package integrity
A New Methodology for Whole-Package Microbial Challenge Testing for Medical Device Trays (Jane Severin, Laura Bix, John Linz, Dennis Gilliland, and Hugh Lockhart), July, 373

Packaging
Testing and Evaluation of Quality Changes of Treated Fresh-Cut Tropical Fruits Packaged in Thermoformed Plastic Containers (S. Paul Singh, V. Chonhenchob, Y. Chantarasomboon, and J. Singh), Sept., 522

Parcels
Measurement, Analysis, and Comparison of the Parcel Shipping Shock and Drop Environment of the United States Postal Service with Commercial Carriers (J. Singh, S. P. Singh, G. Burgess, and K. Saha), July, 424

PAV-aging
Characterization of Thermal Degradation of Liquid Amine Anti-Strip Additives in Asphalt Binders due to RTFO and PAV-Aging (Nazimuddin M. Wasiuddin, Chris M. Fogle, Musharraf M. Zaman, and Edgar A. O'Rear), July, 387

Pavements
Deicer Salt Scaling Resistance of Concrete Containing Manufactured Sands (Ufuk Dilek and Michael L. Leming), March, 134

Pennbounce
An Apparatus to Evaluate the Pace of Baseball Field Playing Surfaces (James T. Brosnan, Andrew S. McNitt, and Maxim J. Schlossberg), Nov., 676

Permanent deformation
Pavement Deformation Characteristics under Repeated Aircraft Loading with Fixed Wander Sequence (Kasthurirangan Gopalakrishnan, Franco Gomez-Ramirez, and Marshall R. Thompson), July, 429

Permanent shear strain
Laboratory-based Unified Permanent Deformation Model for Hot-Mix Asphalt Mixtures (Elie Y. Hajj, Raj V. Siddharthan, Peter E. Sebaaly, and Dean Weitzel), May, 272

Phase angle
Dynamic Modulus of Asphalt Mixtures for Development of Korean Pavement Design Guide (K. Lee, H. Kim, N. Kim, and Y. Kim), March, 143

Physical modeling
Measurement of Strain Distribution and Material Flow in Bulk Deformation by the Screw Method (J. Zhang, S. J. Yuan, and Z. B. He), Sept., 496

Pine
Towards the Development of Accelerated Methods for Assessing the Durability of Wood Plastic Composites (Antonio Silva, Barbara L. Gartner, and Jeffrey J. Morrell), March, 203

Plastic containers
Testing and Evaluation of Quality Changes of Treated Fresh-Cut Tropical Fruits Packaged in Thermoformed Plastic Containers (S. Paul Singh, V. Chonhenchob, Y. Chantarasomboon, and J. Singh), Sept., 522

Plastic strain reversals
A Test Method to Determine Low-Cycle-Fatigue Behavior of Wrinkled Pipe (Sreekanta Das, J. J. Roger Cheng, and David W. Murray), Jan., 1

Playing surface pace
An Apparatus to Evaluate the Pace of Baseball Field Playing Surfaces (James T. Brosnan, Andrew S. McNitt, and Maxim J. Schlossberg), Nov., 676

Polar
Evaluate the Simple Surface Energy of Aggregates Using the Capillary Rise Method (Dennis Sinkonde, Hao Pei Wen, and Xiao Qing Yi), Nov., 618

Polishing
Relationship of Aggregate Microtexture to Asphalt Pavement Skid Resistance (Anthony Luce, Enad Mahmoud, Eyad Masad, and Arif Chowdhury), Nov., 578

Polychloroprene
Tensile Creep Studies on Filled Polychloroprene Elastomer (F. Lacroix, A. Tougui, G. Berton, N. Ranganathan, and N. R. Neelakantan), July, 449

Polymer aging
Methodology of Lifetime Prediction in Polymer Aging (J. Verdu, X. Colin, B. Fayolle, and L. Audouin), May, 289

Pore length
Methodology for Evaluating Candidate Geometric Reference Scaffolds (Joy P. Dunkers, Stefan D. Leigh, David Dean, Malcolm N. Cooke, Richard A. Ketcham, and Marcus T. Cicerone), Nov., 668

Pore volume
Methodology for Evaluating Candidate Geometric Reference Scaffolds (Joy P. Dunkers, Stefan D. Leigh, David Dean, Malcolm N. Cooke, Richard A. Ketcham, and Marcus T. Cicerone), Nov., 668

Postia placenta
Towards the Development of Accelerated Methods for Assessing the Durability of Wood Plastic Composites (Antonio Silva, Barbara L. Gartner, and Jeffrey J. Morrell), March, 203

Powder metallurgy
Production of Aluminum-Silicon Carbide Composites Using Powder Metallurgy at Sintering Temperatures above the Aluminum Melting Point (W. M. Khairaldien, A. A. Khalil, and M. R. Bayoumi), Nov., 655

Precision
Methodology of Assessing Testing Variation for Volumetric Quantities in Hot Mix Asphalt Production (Terhi Pellinen and Thomas Kuczek), May, 281

Preservative
Uncertainties in Corrosion Rate Measurements of Fasteners Exposed to Treated Wood at 100 % Relative Humidity (Samuel L. Zelinka), Jan., 106

Pressurized water reactor
Development of a Stress Corrosion Cracking Test Methodology Using Tube-shaped Specimens (Yasumoto Sato, Xue He, Yoichi Takeda, and Tetsuo Shoji), May, 254

Probability of failure
Time-Dependent Reliability of Thermally Shocked SiC Tubes (Osama M. Jadaan, Noel N. Nemeth, and Albert E. Segall), Jan., 75

Projection methods
Comparison of Different Methods for Fatigue Limit Evaluation by Means of the Monte Carlo Method (Giangiacomo Minak), March, 126

Q

Quality assurance
Methodology of Assessing Testing Variation for Volumetric Quantities in Hot Mix Asphalt Production (Terhi Pellinen and Thomas Kuczek), May, 281

Quality control
Evaluation of Nonnuclear Density Tests on Hot Mix Asphalt Segregation (Chieh-Min Chang, Jian-Shiuh Chen, Chien-Cheng Fang, and Meng-Kung Chang), Nov., 563

R

Radiation hard
Evaluation of a Humidity Sensor for Use in an Environment Exposed to Radiation (Richard Brenner, Nils Bingefors, and Bjarte Mohn), Sept., 469

Real structure
Calculation of Stress Fields Near Notch Roots in Real Life Structures Subjected to In-Plane and Out-of-Plane Deformations (Toyomitsu Harada and Hiroshi Noguchi), Jan., 10

Reference scaffold
Methodology for Evaluating Candidate Geometric Reference Scaffolds (Joy P. Dunkers, Stefan D. Leigh, David Dean, Malcolm N. Cooke, Richard A. Ketcham, and Marcus T. Cicerone), Nov., 668

Reflection cracks
Experimental Study for Evaluating Crack Retardation of Asphalt Concrete Overlays (Sukhanand S. Bhosale and Jnanendra N. Mandal), Nov., 589

Reflective cracking
Using Rolling Dynamic Deflectometer and Overlay Tester to Determine the Reflective Cracking Potential (Dar-Hao Chen), Nov., 644

Rehabilitation strategy
Using Nondestructive Testing Technologies to Assist in Selecting the Optimal Pavement Rehabilitation Strategy (Dar Hao Chen and Tom Scullion), March, 211

Reinforced overlay
Experimental Study for Evaluating Crack Retardation of Asphalt Concrete Overlays (Sukhanand S. Bhosale and Jnanendra N. Mandal), Nov., 589

Relative humidity
Testing of Salt-Contaminated Materials: Use of Aqueous Solutions for Control of Relative Humidity (T. Diaz Gonçalves and M. Marinho Abreu), Sept., 529

Reliability
Laser Welding Conditions to Improve Tensile Strength and Fatigue Strength of a Lap Joint in Aluminum Alloys (Kyohei Kawamoto, Shintaro Yoshimitsu, Hiroshi Noguchi, and Tatsuhiko Yoshimura), July, 416

Repeated load triaxial
Laboratory-based Unified Permanent Deformation Model for Hot-Mix Asphalt Mixtures (Elie Y. Hajj, Raj V. Siddharthan, Peter E. Sebaaly, and Dean Weitzel), May, 272

Repeated shear constant height
Laboratory-based Unified Permanent Deformation Model for Hot-Mix Asphalt Mixtures (Elie Y. Hajj, Raj V. Siddharthan, Peter E. Sebaaly, and Dean Weitzel), May, 272

Residual responses
Pavement Deformation Characteristics under Repeated Aircraft Loading with Fixed Wander Sequence (Kasthurirangan Gopalakrishnan, Franco Gomez-Ramirez, and Marshall R. Thompson), July, 429

Rheology
New Method for Measuring Static Segregation of Self-Consolidating Concrete (Lin Shen, Leslie Struble, and David Lange), May, 303

Robustness
New Method for Measuring Static Segregation of Self-Consolidating Concrete (Lin Shen, Leslie Struble, and David Lange), May, 303

Rock dust
Deicer Salt Scaling Resistance of Concrete Containing Manufactured Sands (Ufuk Dilek and Michael L. Leming), March, 134

Rod
New Method for Testing Fiber-reinforced Polymer Rods Under Flexure (Burong Zhang, Radhouane Masmoudi, and Brahim Benmokrane), March, 171

Rolled sheet
Measuring Stress Strain Curves to Large Strains on Sheet Metal (A. Bacha, M. Feuerstein, Ch. Desrayaud, and H. Klöcker), March, 157

Rolling dynamic deflectometer
Using Rolling Dynamic Deflectometer and Overlay Tester to Determine the Reflective Cracking Potential (Dar-Hao Chen), Nov., 644

Roundness error
Monitoring Hole Quality in a Drilling Process Using a Fuzzy Subtractive Clustering-based System Identification Method (Mohammed T. Hayajneh and Saleh. M. Radaideh), May, 297

RTFO-aging
Characterization of Thermal Degradation of Liquid Amine Anti-Strip Additives in Asphalt Binders due to RTFO and PAV-Aging (Nazimuddin M. Wasiuddin, Chris M. Fogle, Musharraf M. Zaman, and Edgar A. O'Rear), July, 387

Rubber-like materials
A New Biaxial Tension Test Fixture for Uniaxial Testing Machine—A Validation for Hyperelastic Behavior of Rubber-Like Materials (M. Brieu, J. Diani, and N. Bhatnagar), July, 364

S

S-transform
Gearbox Fault Feature Extraction Using Hilbert Transform, S-Transform, and a Statistical Indicator (Xianfeng Fan and Ming J. Zuo), Sept., 477

S-wave
Statistical Correlations Between Seismic Wave Velocities and SPT Blow Counts and the Relative Density of Soils (Emin U. Ulugergerli and Osman Uyanik), March, 187

Safety
Ambiguities in Technical Standards—Case Study IEC 60112—Measuring the Resistance of Solid Isolating Materials to Tracking (Gaber Beges, Edo Stare, and Janko Drnovsek), March, 118

Salt decay
Testing of Salt-Contaminated Materials: Use of Aqueous Solutions for Control of Relative Humidity (T. Diaz Gonçalves and M. Marinho Abreu), Sept., 529

Salt scaling
Deicer Salt Scaling Resistance of Concrete Containing Manufactured Sands (Ufuk Dilek and Michael L. Leming), March, 134

Salt solutions
Testing of Salt-Contaminated Materials: Use of Aqueous Solutions for Control of Relative Humidity (T. Diaz Gonçalves and M. Marinho Abreu), Sept., 529

Sandwich structure
Characterization and Simulation of the Creep Behavior of P92 Sandwich Structures at 923 K with Loading Transverse to the Intermediate Layer (Essam El-Magd, Jürgen Gebhard, and Jan Stuhrmann), Jan., 20

Scanning electron microscopy
Effect of Magnetic Field on Fatigue Crack Propagation of Single-Edge Cracked Soft Ferromagnetic Specimens under Mode I Loading (Yasuhide Shindo, Itaru Shindo, and Fumio Narita), March, 151

Segregation
New Method for Measuring Static Segregation of Self-Consolidating Concrete (Lin Shen, Leslie Struble, and David Lange), May, 303
Evaluation of Nonnuclear Density Tests on Hot Mix Asphalt Segregation (Chieh-Min Chang, Jian-Shiuh Chen, Chien-Cheng Fang, and Meng-Kung Chang), Nov., 563

Segregation probe
New Method for Measuring Static Segregation of Self-Consolidating Concrete (Lin Shen, Leslie Struble, and David Lange), May, 303

Seismic velocities
Statistical Correlations Between Seismic Wave Velocities and SPT Blow Counts and the Relative Density of Soils (Emin U. Ulugergerli and Osman Uyanik), March, 187

Self-consolidating concrete
New Method for Measuring Static Segregation of Self-Consolidating Concrete (Lin Shen, Leslie Struble, and David Lange), May, 303

Separability property
Influence of the Calibration Points on the S_{pb} Parameter Behavior (J. E. Wainstein, R. G. Cocco, L. A. de Vedia, and A. N. Cassanelli), Jan., 53

Shakedown
Pavement Deformation Characteristics under Repeated Aircraft Loading with Fixed Wander Sequence (Kasthurirangan Gopalakrishnan, Franco Gomez-Ramirez, and Marshall R. Thompson), July, 429

Shear
Short-Beam-Shear Testing of Composite Rings With Variable Cross Section as Representative for Full-scale Delamination (P. Samyn, L. Van Schepdael, J. S. Leendertz, W. Van Paepegem, P. De Baets, and J. Degrieck), May, 310

Shear rate
Development of a Viscosity Specification for Hot-Poured Bituminous Sealants (Imad L. Al-Qadi, Eli. H. Fini, Mostafa A. Elseifi, J-F. Masson, and Kevin M. McGhee), July, 395

Shear test
V-Notched Shear Specimens for the Inclined Double Notch Shear Test (Kaj B. Petterson, Jonas M. Neumeister, and Morten Strandberg), Jan., 85

Shear-punch
Small Specimen Test Techniques for Estimating the Tensile Property Degradation of Mod 9Cr-1Mo Steel on Thermal Aging (V. Karthik, K. Laha, P. Parameswaran, K. V. Kasiviswanathan, and Baldev Raj), July, 438

Shrinkage cracking
A Very Early Strength Concrete for Highway Construction (Sun Punurai, Wonsiri Punurai, and Cheng-Tzu Thomas Hsu), Nov., 609

Sigmoidal function
Dynamic Modulus of Asphalt Mixtures for Development of Korean Pavement Design Guide (K. Lee, H. Kim, N. Kim, and Y. Kim), March, 143

Single edge crack
A New Numerical Analysis for Rectangular Tensile Sheet with Single Edge Crack by Boundary Elements (Xiangqiao Yan), Nov., 682

Sintering temperature
Production of Aluminum-Silicon Carbide Composites Using Powder Metallurgy at Sintering Temperatures above the Aluminum Melting Point (W. M. Khairaldien, A. A. Khalil, and M. R. Bayoumi), Nov., 655

Sinuous springs
A Biaxial Load Cell Design for Simultaneous Measurement of Horizontal and Vertical Spring Forces in Sinuous Spring-Supported Seating (Bob Tackett and Jilei Zhang), July, 339

SITE Program
History and Accomplishments of the U.S. Environmental Protection Agency's Superfund Innovative Technology Evaluation (SITE) Monitoring and Measurement Technology (MMT) Program (Stephen Billets and Amy Dindal), Sept., 486

Skid resistance
Relationship of Aggregate Microtexture to Asphalt Pavement Skid Resistance (Anthony Luce, Enad Mahmoud, Eyad Masad, and Arif Chowdhury), Nov., 578

Skinned infield
An Apparatus to Evaluate the Pace of Baseball Field Playing Surfaces (James T. Brosnan, Andrew S. McNitt, and Maxim J. Schlossberg), Nov., 676

Slow crack growth
Time-Dependent Reliability of Thermally Shocked SiC Tubes (Osama M. Jadaan, Noel N. Nemeth, and Albert E. Segall), Jan., 75

Slug calorimeter
Combination of Transient Plane Source and Slug Calorimeter Measurements to Estimate the Thermal Properties of Fire Resistive Materials (D. P. Bentz), May, 240

Small-scale
Short-Beam-Shear Testing of Composite Rings With Variable Cross Section as Representative for Full-scale Delamination (P. Samyn, L. Van Schepdael, J. S. Leendertz, W. Van Paepegem, P. De Baets, and J. Degrieck), May, 310

Sofa loads
A Biaxial Load Cell Design for Simultaneous Measurement of Horizontal and Vertical Spring Forces in Sinuous Spring-Supported Seating (Bob Tackett and Jilei Zhang), July, 339

Soft ferromagnetic materials
Effect of Magnetic Field on Fatigue Crack Propagation of Single-Edge Cracked Soft Ferromagnetic Specimens under Mode I Loading (Yasuhide Shindo, Itaru Shindo, and Fumio Narita), March, 151

Soluble salts
Testing of Salt-Contaminated Materials: Use of Aqueous Solutions for Control of Relative Humidity (T. Diaz Gonçalves and M. Marinho Abreu), Sept., 529

Specific gravity
Effect of Quarry Production Process on Specific Gravities of Aggregates (Mustaque Hossain, Louis A. Ferreira, Zahidul Q. Siddique, Taslima Khanum, and Rodney Montney), Jan., 45

Sphere
A Critical Review of the Diametral Compression Method for Determining the Tensile Strength of Spherical Aggregates (Walter G. Luscher, John R. Hellmann, Albert E. Segall, David L. Shelleman, and Barry E. Scheetz), Nov., 624

Spherical indenter
An Evaluation of Stress-Strain Property Prediction by Automated Ball Indentation (ABI) testing (Raghu V Prakash and Chow Shing Shin), May, 221

Split Hopkinson bar
Dynamic Testing of Materials with the Rotating Disk Indirect Bar-Bar Tensile Impact Apparatus (Yuanming Xia and Yang Wang), Jan., 31

Spring load
A Biaxial Load Cell Design for Simultaneous Measurement of Horizontal and Vertical Spring Forces in Sinuous Spring-Supported Seating (Bob Tackett and Jilei Zhang), July, 339

SPT
Statistical Correlations Between Seismic Wave Velocities and SPT Blow Counts and the Relative Density of Soils (Emin U. Ulugergerli and Osman Uyanik), March, 187

Staircase
Comparison of Different Methods for Fatigue Limit Evaluation by Means of the Monte Carlo Method (Giangiacomo Minak), March, 126

Standard
Ambiguities in Technical Standards—Case Study IEC 60112—Measuring the Resistance of Solid Isolating Materials to Tracking (Gaber Beges, Edo Stare, and Janko Drnovsek), March, 118

Steel wires
A Method for Evaluating Fretting Wear Scars in Thin Steel Roping Wires Based on Confocal Imaging Profilometry (M. A. Urchegui, W. Tato, and X. Gómez), July, 357

Stiffness degradation model
Validation of Initial and Failure Stiffness Definitions in Flexure Fatigue Test for Hot Mix Asphalt (M. A. Abojaradeh, Matthew W. Witczak, Michael S. Mamlouk, and Kamil E. Kaloush), Jan., 95

Stone mastic asphalt
Evaluation of Friction Performance of Coarse Aggregates and Hot-Mix Asphalt Pavements (Shuo Li, Karen Zhu, and Samy Noureldin), Nov., 571

Strain
Experimental Technique for Fully-Reversed Low-Cycle Fatigue Testing of Thin Metallic Foils (D. Yang and J. W. Holmes), July, 404

Strain gage
Calculation of Stress Fields Near Notch Roots in Real Life Structures Subjected to In-Plane and Out-of-Plane Deformations (Toyomitsu Harada and Hiroshi Noguchi), Jan., 10
An Experimentally-Based Analytical Model of the Stress Field in an Iosipescu Composite Test Specimen (Jennifer M. Bell and Edwin M. Odom), July, 381

Strain measurement
Measurement of Strain Distribution and Material Flow in Bulk Deformation by the Screw Method (J. Zhang, S. J. Yuan, and Z. B. He), Sept., 496

Strength
A Critical Review of the Diametral Compression Method for Determining the Tensile Strength of Spherical Aggregates (Walter G. Luscher, John R. Hellmann, Albert E. Segall, David L. Shelleman, and Barry E. Scheetz), Nov., 624

Stress
Stress Evaluation of Railroad Forged Wheels by Ultrasonic Testing (Domingos José Minicuci, Auteliano Antunes dos Santos Júnior, Marcílio H. Andrino, and Francisco de Carvalho Santos), Jan., 66

Stress concentration
Calculation of Stress Fields Near Notch Roots in Real Life Structures Subjected to In-Plane and Out-of-Plane Deformations (Toyomitsu Harada and Hiroshi Noguchi), Jan., 10

Stress corrosion cracking
Development of a Stress Corrosion Cracking Test Methodology Using Tube-shaped Specimens (Yasumoto Sato, Xue He, Yoichi Takeda, and Tetsuo Shoji), May, 254

Stress distributions
An Experimentally-Based Analytical Model of the Stress Field in an Iosipescu Composite Test Specimen (Jennifer M. Bell and Edwin M. Odom), July, 381

Stress intensity factor
Stress Intensity Formulas for Three-dimensional Cracks in the Vicinity of an Interface (Nao-Aki Noda and Bin Liang), March, 192
Crack Growth Behavior in Overloaded Specimens with Sharp Notch in Low Carbon Steel (Anindito Purnowidodo, Shingo Fukuzato, Akihide Saimoto, and Chobin Makabe), Sept., 463
Numerical Analysis of Rectangular Plate with Symmetric Edge Cracks and Edge Half-Circular Hole Cracks in Tension (Xiangqiao Yan), Sept., 557
A New Numerical Analysis for Rectangular Tensile Sheet with Single Edge Crack by Boundary Elements (Xiangqiao Yan), Nov., 682

Stress ratio
Crack Growth Behavior in Overloaded Specimens with Sharp Notch in Low Carbon Steel (Anindito Purnowidodo, Shingo Fukuzato, Akihide Saimoto, and Chobin Makabe), Sept., 463

Stress strain curve
Measuring Stress Strain Curves to Large Strains on Sheet Metal (A. Bacha, M. Feuerstein, Ch. Desrayaud, and H. Klöcker), March, 157

Structure
Methodology for Evaluating Candidate Geometric Reference Scaffolds (Joy P. Dunkers, Stefan D. Leigh, David Dean, Malcolm N. Cooke, Richard A. Ketcham, and Marcus T. Cicerone), Nov., 668

Stud
Reconstitution Process by Stud Welding for the Surveillance Program in Mexico (Jesús Romero, Rogelio Hernández, Filiberto Fernández, Fortino Mercado, and Eric van Walle), Sept., 514

Subtractive clustering
Monitoring Hole Quality in a Drilling Process Using a Fuzzy Subtractive Clustering-based System Identification Method (Mohammed T. Hayajneh and Saleh. M. Radaideh), May, 297

Superpave
Effect of Quarry Production Process on Specific Gravities of Aggregates (Mustaque Hossain, Louis A. Ferreira, Zahidul Q. Siddique, Taslima Khanum, and Rodney Montney), Jan., 45

Support vector machine
Fault Classification of Water Hydraulic System by Vibration Analysis with Support Vector Machine (H. X. Chen, Patrick S. K. Chua, and G. H. Lim), July, 408

Surface energy
Bitumen Surface Energy Characterization by Inverse Gas Chromatography (Arno W. Hefer, Dallas N. Little, and Bruce E. Herbert), May, 233
Evaluate the Simple Surface Energy of Aggregates Using the Capillary Rise Method (Dennis Sinkonde, Hao Pei Wen, and Xiao Qing Yi), Nov., 618

Surface free energy
Effect of Antistrip Additives on Surface Free Energy Characteristics of Asphalt Binders for Moisture-Induced Damage Potential (Nazimuddin M. Wasiuddin, Chris M. Fogle, Musharraf M. Zaman, and Edgar A. O'Rear), Jan., 36
Characterization of Thermal Degradation of Liquid Amine Anti-Strip Additives in Asphalt Binders due to RTFO and PAV-Aging (Nazimuddin M. Wasiuddin, Chris M. Fogle, Musharraf M. Zaman, and Edgar A. O'Rear), July, 387

Surface roughness
Monitoring Hole Quality in a Drilling Process Using a Fuzzy Subtractive Clustering-based System Identification Method (Mohammed T. Hayajneh and Saleh. M. Radaideh), May, 297

Surface tension
Bitumen Surface Energy Characterization by Inverse Gas Chromatography (Arno W. Hefer, Dallas N. Little, and Bruce E. Herbert), May, 233

Surface texture
Quantification of Coarse Aggregate Surface Texture Using Image Analysis (Tongyan Pan and Erol Tutumluer), March, 177

Surface water absorption
The Development of ASTM D 4772: The Water Flow Test Method (Richard T. Cary), Sept., 533

Surveillance
Reconstitution Process by Stud Welding for the Surveillance Program in Mexico (Jesús Romero, Rogelio Hernández, Filiberto Fernández, Fortino Mercado, and Eric van Walle), Sept., 514

T

Technology evaluation
History and Accomplishments of the U.S. Environmental Protection Agency's Superfund Innovative Technology Evaluation (SITE) Monitoring and Measurement Technology (MMT) Program (Stephen Billets and Amy Dindal), Sept., 486

Tensile strength
Fatigue Prediction of Lightweight Thermoplastic Fiber-Metal Laminates (H. Kang and G. Reyes-Villanueva), May, 266
Laser Welding Conditions to Improve Tensile Strength and Fatigue Strength of a Lap Joint in Aluminum Alloys (Kyohei Kawamoto, Shintaro Yoshimitsu, Hiroshi Noguchi, and Tatsuhiko Yoshimura), July, 416

Tensile test
Dynamic Testing of Materials with the Rotating Disk Indirect Bar-Bar Tensile Impact Apparatus (Yuanming Xia and Yang Wang), Jan., 31

Terry fabric
The Development of ASTM D 4772: The Water Flow Test Method (Richard T. Cary), Sept., 533

Test method
A Test Method to Determine Low-Cycle-Fatigue Behavior of Wrinkled Pipe (Sreekanta Das, J. J. Roger Cheng, and David W. Murray), Jan., 1

Test methodology
Development of a Stress Corrosion Cracking Test Methodology Using Tube-shaped Specimens (Yasumoto Sato, Xue He, Yoichi Takeda, and Tetsuo Shoji), May, 254

Test procedure
Ambiguities in Technical Standards—Case Study IEC 60112—Measuring the Resistance of Solid Isolating Materials to Tracking (Gaber Beges, Edo Stare, and Janko Drnovsek), March, 118

Texture
Texture Evaluation in Zr-2.5 % Nb Pressure Tubes Using Kearn's f Parameter (K. Kapoor, C. Padmaprabu, S. V. Ramana Rao, T. Sanyal, and B. P. Kashyap), May, 327
Relationship of Aggregate Microtexture to Asphalt Pavement Skid Resistance (Anthony Luce, Enad Mahmoud, Eyad Masad, and Arif Chowdhury), Nov., 578

Thermal aging
Small Specimen Test Techniques for Estimating the Tensile Property Degradation of Mod 9Cr-1Mo Steel on Thermal Aging (V. Karthik, K. Laha, P. Parameswaran, K. V. Kasiviswanathan, and Baldev Raj), July, 438

Thermal comfort
Assessment of Clothing Effects in Thermal Comfort Standards: A Review (Jianhua Huang), Sept., 455

Thermal conductivity
Combination of Transient Plane Source and Slug Calorimeter Measurements to Estimate the Thermal Properties of Fire Resistive Materials (D. P. Bentz), May, 240

Thermal degradation
Characterization of Thermal Degradation of Liquid Amine Anti-Strip Additives in Asphalt Binders due to RTFO and PAV-Aging (Nazimuddin M. Wasiuddin, Chris M. Fogle, Musharraf M. Zaman, and Edgar A. O'Rear), July, 387

Thermal environment
Assessment of Clothing Effects in Thermal Comfort Standards: A Review (Jianhua Huang), Sept., 455

Thermal property
Assessment of Clothing Effects in Thermal Comfort Standards: A Review (Jianhua Huang), Sept., 455

Thermoplastic fiber-metal laminate
Fatigue Prediction of Lightweight Thermoplastic Fiber-Metal Laminates (H. Kang and G. Reyes-Villanueva), May, 266

Timber
Boundary Condition Role in Tests of Wood Compression Webs (Robert J. Leichti, Karl Kleemann, and Thomas H. Miller), Sept., 539

Tissue engineering
Methodology for Evaluating Candidate Geometric Reference Scaffolds (Joy P. Dunkers, Stefan D. Leigh, David Dean, Malcolm N. Cooke, Richard A. Ketcham, and Marcus T. Cicerone), Nov., 668

Toughness
Reconstitution Process by Stud Welding for the Surveillance Program in Mexico (Jesús Romero, Rogelio Hernández, Filiberto Fernández, Fortino Mercado, and Eric van Walle), Sept., 514

Towel
The Development of ASTM D 4772: The Water Flow Test Method (Richard T. Cary), Sept., 533

Trametes versicolor
Towards the Development of Accelerated Methods for Assessing the Durability of Wood Plastic Composites (Antonio Silva, Barbara L. Gartner, and Jeffrey J. Morrell), March, 203

Transient plane source technique
Combination of Transient Plane Source and Slug Calorimeter Measurements to Estimate the Thermal Properties of Fire Resistive Materials (D. P. Bentz), May, 240

Triaxial strength test
Laboratory-based Unified Permanent Deformation Model for Hot-Mix Asphalt Mixtures (Elie Y. Hajj, Raj V. Siddharthan, Peter E. Sebaaly, and Dean Weitzel), May, 272

Truss web
Boundary Condition Role in Tests of Wood Compression Webs (Robert J. Leichti, Karl Kleemann, and Thomas H. Miller), Sept., 539

Tube
Time-Dependent Reliability of Thermally Shocked SiC Tubes (Osama M. Jadaan, Noel N. Nemeth, and Albert E. Segall), Jan., 75

Tube-shaped specimen
Development of a Stress Corrosion Cracking Test Methodology Using Tube-shaped Specimens (Yasumoto Sato, Xue He, Yoichi Takeda, and Tetsuo Shoji), May, 254

Turfgrass
An Apparatus to Evaluate the Pace of Baseball Field Playing Surfaces (James T. Brosnan, Andrew S. McNitt, and Maxim J. Schlossberg), Nov., 676

Twist-off method
New Twist-Off Method for the Evaluation of In-Situ Strength of Concrete (M. Naderi), Nov., 602

U

U.S. EPA
History and Accomplishments of the U.S. Environmental Protection Agency's Superfund Innovative Technology Evaluation (SITE) Monitoring and Measurement Technology (MMT) Program (Stephen Billets and Amy Dindal), Sept., 486

Ultimate tensile strength
Small Specimen Test Techniques for Estimating the Tensile Property Degradation of Mod 9Cr-1Mo Steel on Thermal Aging (V. Karthik, K. Laha, P. Parameswaran, K. V. Kasiviswanathan, and Baldev Raj), July, 438

Ultrasonic
Stress Evaluation of Railroad Forged Wheels by Ultrasonic Testing (Domingos José Minicuci, Auteliano Antunes dos Santos Júnior, Marcílio H. Andrino, and Francisco de Carvalho Santos), Jan., 66

Uniaxial test
A New Biaxial Tension Test Fixture for Uniaxial Testing Machine—A Validation for Hyperelastic Behavior of Rubber-Like Materials (M. Brieu, J. Diani, and N. Bhatnagar), July, 364

Unified model
Laboratory-based Unified Permanent Deformation Model for Hot-Mix Asphalt Mixtures (Elie Y. Hajj, Raj V. Siddharthan, Peter E. Sebaaly, and Dean Weitzel), May, 272

V

V-notch
V-Notched Shear Specimens for the Inclined Double Notch Shear Test (Kaj B. Petterson, Jonas M. Neumeister, and Morten Strandberg), Jan., 85

Variational distance
Methodology for Evaluating Candidate Geometric Reference Scaffolds (Joy P. Dunkers, Stefan D. Leigh, David Dean, Malcolm N. Cooke, Richard A. Ketcham, and Marcus T. Cicerone), Nov., 668

Very early strength concrete
A Very Early Strength Concrete for Highway Construction (Sun Punurai, Wonsiri Punurai, and Cheng-Tzu Thomas Hsu), Nov., 609

Viscosity
Development of a Viscosity Specification for Hot-Poured Bituminous Sealants (Imad L. Al-Qadi, Eli. H. Fini, Mostafa A. Elseifi, J-F. Masson, and Kevin M. McGhee), July, 395

Volumetric quantities
Methodology of Assessing Testing Variation for Volumetric Quantities in Hot Mix Asphalt Production (Terhi Pellinen and Thomas Kuczek), May, 281

W

Water absorption
The Development of ASTM D 4772: The Water Flow Test Method (Richard T. Cary), Sept., 533

Water flow test method
The Development of ASTM D 4772: The Water Flow Test Method (Richard T. Cary), Sept., 533

Water hydraulic system
Fault Classification of Water Hydraulic System by Vibration Analysis with Support Vector Machine (H. X. Chen, Patrick S. K. Chua, and G. H. Lim), July, 408

Wavelet transform
Fault Classification of Water Hydraulic System by Vibration Analysis with Support Vector Machine (H. X. Chen, Patrick S. K. Chua, and G. H. Lim), July, 408

Wear
Monitoring Hole Quality in a Drilling Process Using a Fuzzy Subtractive Clustering-based System Identification Method (Mohammed T. Hayajneh and Saleh. M. Radaideh), May, 297

Weibull cumulative distribution function
Nondestructive Testing for the Integrity Evaluation of Erosive and Abrasive Boundary Layers (Y. Meged), Nov., 634

Weibull statistics
Time-Dependent Reliability of Thermally Shocked SiC Tubes (Osama M. Jadaan, Noel N. Nemeth, and Albert E. Segall), Jan., 75

Welding
Reconstitution Process by Stud Welding for the Surveillance Program in Mexico (Jesús Romero, Rogelio Hernández, Filiberto Fernández, Fortino Mercado, and Eric van Walle), Sept., 514

Wheel
Stress Evaluation of Railroad Forged Wheels by Ultrasonic Testing (Domingos José Minicuci, Auteliano Antunes dos Santos Júnior, Marcílio H. Andrino, and Francisco de Carvalho Santos), Jan., 66

White rot
Towards the Development of Accelerated Methods for Assessing the Durability of Wood Plastic Composites (Antonio Silva, Barbara L. Gartner, and Jeffrey J. Morrell), March, 203

Whole-package testing
A New Methodology for Whole-Package Microbial Challenge Testing for Medical Device Trays (Jane Severin, Laura Bix, John Linz, Dennis Gilliland, and Hugh Lockhart), July, 373

Wood
Uncertainties in Corrosion Rate Measurements of Fasteners Exposed to Treated Wood at 100 % Relative Humidity (Samuel L. Zelinka), Jan., 106
Boundary Condition Role in Tests of Wood Compression Webs (Robert J. Leichti, Karl Kleemann, and Thomas H. Miller), Sept., 539

Wood plastic composite (WPC)
Towards the Development of Accelerated Methods for Assessing the Durability of Wood Plastic Composites (Antonio Silva, Barbara L. Gartner, and Jeffrey J. Morrell), March, 203

Wood-based products
Flexural Creep Apparatus and Testing for Structural Composite Lumber (Robert Leichti, Milo Clauson, and Daniel Cheney), Sept., 553

Wrinkled pipeline
A Test Method to Determine Low-Cycle-Fatigue Behavior of Wrinkled Pipe (Sreekanta Das, J. J. Roger Cheng, and David W. Murray), Jan., 1

X

X-ray diffraction
Texture Evaluation in Zr-2.5 % Nb Pressure Tubes Using Kearn's *f* Parameter (K. Kapoor, C. Padmaprabu, S. V. Ramana Rao, T. Sanyal, and B. P. Kashyap), May, 327

X-ray imaging
Quality Assurance of Manufactures by Means of Intelligent Tomographic Processing (Rosana G. Barbuzza, Marcelo J. Vénere, and Alejandro Clausse), Jan., 59

Z

Zr-2.5Nb
Texture Evaluation in Zr-2.5 % Nb Pressure Tubes Using Kearn's *f* Parameter (K. Kapoor, C. Padmaprabu, S. V. Ramana Rao, T. Sanyal, and B. P. Kashyap), May, 327